THREE ESSAYS ON LEGISLATIVE BEHAVIOR IN AMERICAN LEGISLATURES

A Dissertation

Presented to

The Faculty of the Department

of Political Science

University of Houston

In Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Philosophy

By

Robert Lucas Williams

August, 2016

Acknowledgements

I owe a great deal of gratitude to my committee members for their patience, encouragement, and resolute support: Dr. Clark, committee chair; Dr. Kirkland; Dr. Casellas; and Dr. Hamm. I submit my profound appreciation for the quality training and instruction my committee has afforded me.

My work would not have been complete without the invaluable input of many colleagues. In particular, Dr. Richard W. Murray, Dr. Kent L. Tedin, Dr. Susan Scarrow, Dr. Ling Zhu, Dr. Royce Carroll, Dr. Jeronimo Cortina, Dr. Scott J. Basinger, Dr. Elizabeth N. Simas, Dr. Scott Clifford, and Dr. Jeffrey Church provided shrewd advice on many occasions. I also offer many thanks to my graduate school colleagues for their various comments and suggestions: Dr. Abdullah Aydogan, Dr. Andrea Eckelman, Dr. Alper Tolga Bulut, Markie McBrayer, Zachary Turpin, Yeaji Kim, Eric DeBruin, Roger Abshire, Marcia Bumgardner Beyer, Matthew Ward, Sarah Mallams, Leonardo Antenangeli, Scott Hofer, Jonathan A. Solis, Margarita Maria Ramirez, Luai Abdul Rauf Allarakia, Vesa J. Koskimaa, Savannah Sipole, Susan Achury, and Philip Waggoner.

Above all, I express the deepest appreciation to my family and friends who have loved and supported me unconditionally. I express many thanks to Randy Miller, A.J. Slusser, Paul Holroyd, Caleb Garrison, Jason Watkins, Leah Williams, Dr. C.P. Chen, and Erica Chen. Most importantly, this accomplishment would not have been possible without the lifelong love and encouragement of my parents, Rebecca Williams and Philip Williams.

To my wife,

Isabel Chen,

For her relentless joy and unwavering love

THREE ESSAYS ON LEGISLATIVE BEHAVIOR IN AMERICAN LEGISLATURES

An Abstract of a Dissertation

Presented to

The Faculty of the Department

of Political Science

University of Houston

In Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Philosophy

By

Robert Lucas Williams

August, 2016

Abstract

The present research assesses three aspects of legislative behavior. The first chapter takes advantage of the opportunity presented by the Minnesota Legislature's surprise 1913 ban on parties from its chamber caucuses, election ballots, and nomination processes to assess party influence. I collect roll call votes from the sessions immediately prior to and immediately following the session in which this removal of parties occurred. I analyze the dimensionality and extent to which party predicts voting behavior and compare the results across the two sessions. I find that party influence declines across this period and I attribute this decline to the loss of partisan influence in the political process. Second, economic forces have been shown to affect access to the political process in profound ways. The second chapter suggests these effects structure how representatives view their constituencies and thus how they behave in the legislative arena. One powerful economic force over the past half-century has been the growth in income inequality. When income inequality is high, fewer citizens share more of the money. Political influence is an outgrowth of income. Thus, legislators representing districts with large degrees of income inequality will be more certain about how they ought to behave in order to satisfy those constituents who hold the greatest control over reelection prospects. I predict the consistency of legislators' roll call behavior in the U.S. Senate using state level measures of income inequality. The results indicate that constituency economic inequality leads to more consistent roll call behavior. The third chapter takes steps toward understanding the nature and extent of legislators' knowledge about the internal operations in their chambers and develops a strategy for measuring legislative knowledge. I explore some possible motivations for legislators to obtain this knowledge before conducting a factor analysis on the question battery. I test respondents' knowledge on 19 questions

regarding the legislative process in their chambers. Using an original survey of state legislators conducted in early 2015 in all 50 U.S. states, I build measurements of legislative knowledge based on data reduction techniques from an Item Response Theory analysis. I discuss best practices in measuring legislative knowledge.

Table of Contents

Introduction

Democratic representatives make decisions in response to personal, institutional, and constituent forces. The present research investigates three phenomena which have direct political ramifications for legislative politics. First, political parties are a nearly ubiquitous fixture on the legislative scene. Research has generated a great deal of knowledge about how parties organize members within legislative chambers and coherent choices for the electorate. We know comparatively little about legislative behavior in environments absent parties. Chapter 1 assesses whether legislative behavior becomes less structured by party when the tools used by partisan forces are abruptly removed from the institutional and constituent-oriented processes that enable them to influence the decisions legislators make. Second, scholars have generated a large amount of knowledge about the causes and consequences of inequality within the political process. Chapter 2 evaluates a specific consequence of income inequality, legislative consistency. Because legislators rely on their most influential constituents for guidance on making legislative decisions, those who represent highly unequal constituents are more certain about how they need to behave because fewer constituents hold most of the political power. As a constituent force, higher income inequality generates more consistent legislators. Third, utilizing chamber leadership powers is one of the most important tools used by parties to discipline their members in the policymaking process. Chapter 3 gauges the state of legislative knowledge in American statehouses. A survey assessment is administered in order to obtain measures of the amount of knowledge and the particular procedures about which legislators are (or are not) aware. Legislators generally answer correctly on about 70% of questions regarding the legislative process and how their chamber is organized. More importantly, this research makes an initial step toward understanding how researchers might go about measuring legislative knowledge in pursuit of answering questions regarding legislative behavior, such as how individual knowledge among members may lead to greater effectiveness.

The contents of Chapter 1 explore the 1913 switch from a partisan to an non-partisan legislature occurring in the Minnesotan statehouse. Historical evidence suggests that the change was a largely accidental, but nonetheless real, removal of parties from the legislative process and election ballots. Observing the sessions immediately prior to and following this surprise ban on parties, the analysis reveals discernibly less partisan behavior in the session following the abolition of parties compared

to the session preceding it. As I argue below, this amounts to evidence of party effects in legislatures and that parties do matter in the policymaking process.

Chapter 2 posits that income inequality leads to more consistent legislators. Economic forces have been shown to affect access to the political process in profound ways. The present research suggests that these effects structure how representatives view their constituencies. When income inequality is high, legislators need not pursue the median voter because affluent constituents political influence is more powerful than that of the median voter. To test this assertion, I gather dimensional prediction errors based on NOMINATE roll-call analysis for U.S. Senators. I append these data with Gini-coefficients for income inequality in each state as well as several other relevant indicators. The results indicate that constituency economic inequality leads to greater roll-call predictability among legislators as a result of having fewer constituents to satisfy.

In Chapter 3 makes two strides toward research into legislative knowledge. Defined as the cognitive ability of a legislator to navigate the legislative process via procedural rules and comprehension of chamber power dynamics, legislative knowledge is a largely unexplored, high impact part of legislative behavior. To start, Chapter 3 generates several testable hypotheses rooted in various veins of literature. Then, I present results from a survey of legislators in the American states asking members to report on their knowledge about procedural rules and leadership powers. First, the legislative knowledge concept is developed. Next, the responses are used to investigate whether legislators' procedural knowledge exists along one or more latent dimensions. A series of factor analytic techniques are then used to assess the content and question wording of the survey items in order to determine which ones best measure legislative knowledge. A discussion is provided with regard to best practices and future directions for research.

Chapter 1 - Party Influence: Evidence from Minnesota's Natural Experiment

"The latent causes of faction are thus sown in the nature of man." -James Madison, Federalist Paper No. 10

When Madison warned of the dangers of factions, he sought to shield the new republic from the innate threat posed by organized interests. Similar concerns pushed progressive reformers of the early 20th century to abolish parties in various offices across several states. When Minnesota eliminated formal party designations from its legislature's ballots, chamber caucuses, and nomination processes in 1913, it removed one of the most pervasive characteristics predicting legislative behavior in American politics since the turn of the twentieth century. Parties provide coherence to politics, package issues, and lend predictability to voting among both constituents and legislators. Because the ban on parties in Minnesota was intended as a poison pill amendment to a broader bill, it was never expected to come to the floor for a vote, let alone pass and eventually become law. It was, therefore, a surprise. I describe the political events surrounding this fortuitous empirical occurrence in greater detail below. The analysis of party effects below rests on the central assumption that the roll call vote bringing non-partisanship to Minnesota legislative politics was unexpected and therefore forms the conditions for a natural experiment testing party influence. This chapter assesses party influence on the structure of legislative roll calls in Minnesota prior to 1913 and immediately afterward in a non-partisan environment.

While experiments are a guiding principle in scientific inquiry, opportunities in social science to test our theories in an experimental setup occur infrequently. Minnesota's unexpected elimination of parties from the legislature provides such a circumstance. Other studies of nonpartisan legislatures reveal little partisan roll call voting structure (Welch and Carlson, 1973; Jenkins, 1999; Wright and Schaffner, 2002). This paper provides further support for the notion that parties provide clarity to legislative politics. Before parties were removed from the political process in Minnesota, partisan affiliation predicts legislators ideal points well. In the session immediately following the removal of parties, partisan affiliations cease to predict ideal points estimates in a sta-

tistically meaningful way. The evidence presented below suggests that distinguished government sanctioned parties aide natural factions in disciplining representatives in government.

A Legislative History of Minnesota's Surprise Non-Partisan Legislature

No member at the beginning of the 38th Session of the Minnesota Legislature (1913-1914) expected to vote on eliminating parties from the democratic process (Adrian, 1952). Because every member elected to the legislature had been nominated by a party organization in the state, their ideals and political futures were intrinsically tied to those parties. Prior to the 38th Session, parties organized themselves using the same tools we are accustomed to studying in contemporary American legislatures. Patronage, for example, played a deciding factor in the election of speaker in the 37th Session (1911-1912). The presumptive speaker coming into January 1911 was Burnquist-R. However, his refusal to promise key members influential positions in the legislature cost him the Republican caucus election to H.H. Dunn-R, who had signaled his intention to reward members voting for him. Besides chairmanships, he followed through on this promise by providing at least one staffer for each Republican who had voted for his nomination ((Haines, 1911), 46). Furthermore, all of the individuals appointed to major committee chair positions were Republican. Partisan processes clearly structured the institutional setup of the 37th House chamber. In the details describing these events below, I demonstrate two key points: 1) Parties beyond the 38th Session of the Minnesota Legislature no longer held key rewards and disciplinary tools needed to influence legislative behavior and 2) The vote to remove these carrots and sticks as well as the labels underlying them came unexpectedly in a manner specific to the 38th Session.

In addition to patronage, another important source of party power over its members is the ability to control the nomination process. Open nomination systems, particularly Minnesota's, have been shown to exhibit significantly less contact between party officials and the candidates prior to the member's initial election to the chamber (Tobin and Keynes, 1975). Senate File 412 also provided for nomination procedures such that any voting age citizen could file for inclusion on the primary ballot for a $10 fee and without any requisite signatories from voters.[1] When party delegates next

[1] $10 in 1913 has the same buying power as $241 today, according to the Bureau of Labor Statistics.

met for their county, congressional district, and statewide conventions following the 1913 election law changes, they would not vote on state legislative nominations (Folwell, 1969). Almost any ambitious individual wishing to circumvent a party organization in running for public office could raise two hundred bucks for a filing fee. Thus, Minnesotan parties had their nominating power fully revoked in 1913.

Parties clearly structured the speakership vote in the 37th with all present Republicans voting for Dunn and all others voting for their party's candidate, except the single Socialist who abstained. Majority party leaders maintain control over legislative outcomes by controlling internal resources such as patronage and external resources such as nomination powers. For example, in the 37th Session, the speaker appointed five Republican members to the five member Rules Committee. Among the other powers held by the 37th speaker was control over the usage of all rooms and spaces in the Hall of the House, which is also a source of clout in contemporary legislatures. In terms of procedural rules, the members of the 37th were required to vote when present (Rule 15), all bills were reported by committees back to the speaker (Rule 20), speaker appointed Chairman to the Committee of the Whole (Rule 27); all factors empowering majority leaders.[2] Minority party rights procedures, such as a discharge petition were not mentioned in the House Rules of either session. Whether party members sought the election of their party's nominee by favor or fear, affiliation with a party organization was a fundamental component of a legislator's considerations when roll call voting.

The 38th Session began in a typical fashion with ordinary expectations among legislators. The roll call vote on Senate File 412[3] was abrupt. Presuming that members would not vote to remove the parties which had elected them, Republican House leaders crafted an attempt to kill the broader non-partisan Senate bill by inserting a "poison pill" amendment that included the legislature in the

[2]All rules and procedures are contained in the House Journal.

[3]Senate File 412 was the bill that eliminated parties from other offices.

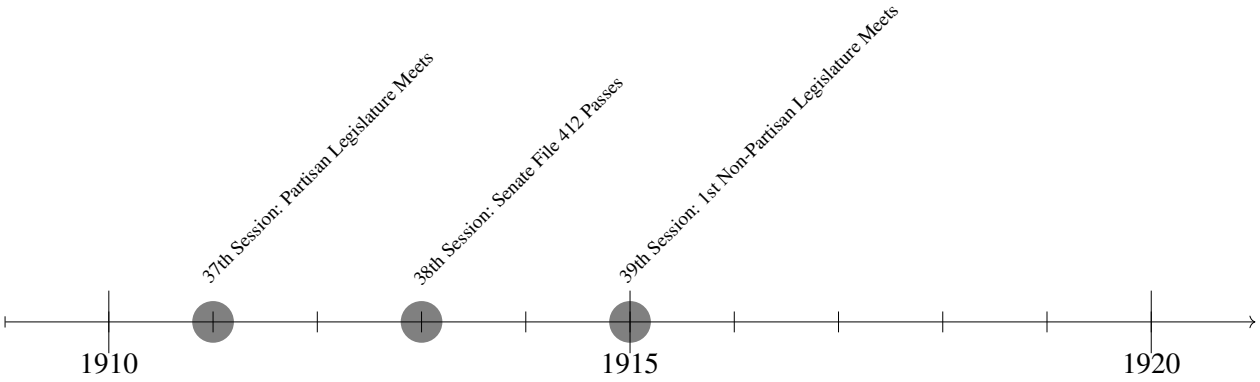


Figure 1: Events Timeline

effort to oust parties. It was a *surprise*. A series of historiographical volumes chronicling each session of the Minnesota Legislature, in institutional, issues-based, procedural, biographical, and internal political detail, make no mention of non-partisan elections prior to the session in which the vote occurred (Haines, 1911). The 37th nor 38th House Journals mention the abolition of parties from any office prior to the February introduction of Senate File 412, which had been passed in the weeks preceding its introduction in the House.

Moreover, Charles Adrian (1952) predicates his exploration of the genesis of the non-partisan legislature, "When the thirty-eighth Minnesota legislature met in January 1913, probably not a single member suspected that before the session ended the state would have a law-making body chosen without party designation" (155). Adrian goes on to trace the events leading up to the unexpected passage of the poison pill amendment. A floor amendment to a Senate bill removing parties from other elected offices was offered to include the legislature. Representative G.W. Brown (R), with the Speaker's (Rines-R) word that the Elections Committee would block the bill, introduced the amendment with the intention of obstructing the larger bill. This was a hasty attempt on the part of Brown and the leadership to block a bill banning parties from other state and local offices. To be sure, the initial indication that a non-partisan law applying to any office came in a special session in June of 1912. The legislature passed a bill abolishing parties from primary elections in judicial, city, and county races. Yet, there was no indication this would ever come up for a vote applying the principle to general elections, especially not those for the legislature itself. If the possibility of applying the non-partisan measure to the legislature had come up before, it had not been under any

serious discussion. It was not a credible possibility.

Given the lack of indications suggesting a ban on parties, one wonders why the obstructionist amendment in fact succeeded. National political climate and local political culture provide an explanation. During the first two decades of the twentieth century, Progressives profoundly impacted U.S. politics. Anti-establishment urban white-collar men detested corruption in big business and its influence in politics ((Hofstadter, 1955), 131-148). One example of Progressive influence in Minnesota came in what Masket (2011) might call an Informal Party Organization (IPO). The Saturday Lunch Club of Minneapolis hosted gatherings in which 150 local active members collectively endorsed progressively-minded candidates for the state legislature, among others (Haines, 1911). In 1913, Minnesota political culture experienced a surge in reform efforts marked by a distrust of political parties (Kunkell, 1988). Likely influenced by the Progressive sentiment of distrust for Republicans and Democrats at the national level, Minnesota reformers had recently promoted a bill that banished party labels from several other elections in the state. However, because this stood to harm those who had been nominated by one of the two major parties and elected under Democrat or Republican monikers, it was not a measure expected to gain any serious traction (in fact, it never gained traction except as an obstructionist measure). Many Republicans, the state's dominant party, stood to potentially lose reelection if their party labels were not identifiable to voters on election day. Nonetheless, reformers won a battle they had not expected to fight.

The events surrounding the 1913 abolition of parties from the Minnesota Legislature form the conditions necessary for a natural experiment testing partisan influence on legislative behavior. Legislators voting in favor of the obstructionist amendment making the legislature non-partisan did so for three reasons: 1) portending the First Red Scare some members believed it would deter the rising Socialist party, 2) others saw it as a way to avoid the increasingly problematic relationship between the splintered Republican and Bull Moose parties, and 3) Prohibitionists considered non-partisanship as a means to achieving the abolition of alcohol (Chrislock, 1971). These motivations for eliminating parties are a testament to the complexity of the latent political structure of the legislature. Due to this complexity, as well as inattentive and myopic leaders, the 1913 ban on parties in

the legislature was largely unforeseen. Because the vote came largely as a surprise, legislators serving in the 37th Session (1911-1912) operated under a partisan regime. Within a year's time, new laws removed partisanship from the nominations process, chamber caucuses, and election ballots. Members of the 39th Session had no partisan election processes nor presence in chamber caucuses, effectively removing parties from their decision making calculus. These reforms combined provide an excellent opportunity to examine party influence in legislative settings.

Why We Should Expect Parties to Matter in Roll Call Voting Decisions

Parties organize in order to generate collective action toward particular ends of a set of issues. Such organizations seek to unify actors in a variety of capacities to collaborate in electing candidates and passing policy. Schattschneider (1960) and Sorauf (1980) describe the way parties achieve this as a "tripartite" model. The model suggests they operate as parties-in-government, parties-in-the-electorate, and parties-as-organizations. Party organizations are conduits for communication between candidates and voters, they utilize legislative structures to discipline their members, and they provide a central organization to the whole enterprise of group influence in government. Scholars have shown that in the absence of parties, legislators exhibit less behavioral structure and are instead influenced by constituent characteristics (Welch and Carlson, 1973; Wright and Schaffner, 2002). Indeed, parties structure roll call behavior when competition between the parties is high and electoral competition is low (Carroll and Eichorst, 2013) as well as when procedural and agenda control rules empower majorities (Cox, Kousser and McCubbins, 2010; Weingast, 2010; Clark, 2012). Parties combine a set of institutional and electoral tools with the power of their brand to maintain (or challenge) power in pursuit of goals common among the membership.

For purposes of this study, the term *party* can be understood as an organization that constrains its members' behavior by controlling the nominating process, controlling the chamber agenda, appointing committee members, and by providing members with various reelection resources. Formal parties have norms that structure the power apparatus within the chamber. They use their party's "brand name" to win elections and partisan chamber leaders harness power by controlling the agenda, bill paths, and committee assignments (Cox and McCubbins, 1993, 2005; Finocchiaro and Rohde, 2008).

Parties are powerful entities. They utilize power over legislative elections and institutional processes to discipline their members into voting particular ways on legislation. I argue the loss of the partisan label on election ballots, the banishment of party caucuses in the legislature, and control over nominations combine to hobble party organizations' ability to structure roll call votes in the same capacity it had in the partisan era. In developing these expectations, I rely on the same central assumptions made in the debate over preferences (e.g.(Krehbiel, 1993)) and parties (e.g.(Aldrich and Battista, 2002; Cox and Poole, 2001)). That is, low-dimensionality in roll call vote structures. I also assume that legislators care about reelection and their behavior will reflect their own perceptions about the actions most likely to achieve that central goal (Mayhew, 1974). Finally, I assume voters seek to minimize their costs and maximize efficiency by relying on the party label as an indicator of a candidate's policy positions (Downs, 1957). Below, I test whether the electoral and institutional ties between party organizations and legislators result in the party influence when compared to a non-partisan baseline.

The Tools of a Party Organization

An organized party provides resources for the election of its members (Jenkins, 2008) as well as the structural capacity necessary for passing a common agenda once members are elected (Cox and McCubbins, 1993). Political organizations help solve collective action and collective choice problems by organizing voters and coordinating among elected officials. "Parties are designed as attempts to solve problems that current institutional arrangements do not solve and that politicians have come to believe they cannot solve" (Aldrich 1995, 22). Additionally, formal party organizations provide leaders with clear positions of power and the resources necessary to reward and punish party members for loyal and disloyal behavior. With institutional assets such as agenda setting (positive and negative) control (Bianco and Sened, 2005; Hartog and Monroe, 2011) and committee assignment power (Frisch and Kelly, 2006; Clark and Williams, 2016) party leaders are able to structure legislative outputs (Cox, Kousser and McCubbins, 2010; Clark, 2012; Anzia and Jackman, 2013). The implication here is that members have a higher degree of certainty about whether they will receive rewards and punishments as a result of their behavior under a formal party structure, than they do under an informal structure.

Parties also leverage their control over nominations in persuading legislators to toe the party line. Parties in most legislatures in the U.S. recruit and approve nominees to run using their brand's name. The process allows party officials to select party loyalists in the first place and threaten primary challengers when candidate deviate too often from the party position. As noted above, legislators in the 37th Session were nominated for candidacy via partisan processes. In the 39th Session, they were nominated in an open system absent parties and ballot access was broadly available outside of the party system. These changes in the nomination system, combined with the removal of parties from the institutional setting, suggest an expectation that party influence will be observable in the former session (37th) and unobservable in the latter (39th).

The Value of a Partisan Label

Legislators have party labels that serve as descriptors by which constituents identify them. In the United States, most legislators carry either an official Democrat or Republican label and past research has shown that these labels serve as signals to constituents (Downs, 1957; Lodge and Hamill, 1986; Rhan, 1993). Parties rely on their official labels to signal "...an interval within which their ideal points must lie" (Snyder and Ting, 2003). In order to maintain credibility and appeal as an organization, parties must ensure that their candidates, once in office, support the parameters of this ideological interval. Legislative leaders also rely on the party's brand to pass agendas (Butler and Powell, 2014). As a result, legislators are early and often pressured to vote along with the party position.

Citizens rely on partisan identities to make assessments of their representatives which inform their voting decisions at the polls (Downs, 1957; Rhan, 1993; Lodge and Hamill, 1986). When representatives perceive strong partisan identities among citizens, they will adjust their behavior in the chamber setting accordingly (Kingdon, 1977). They toe the party line at least enough to send a partisan signal to their constituents (Snyder and Ting, 2003). Thus, the party label is an important communication device between representative and constituent. Party identifiers come with a set of expectations for both constituent and representative. Without this attachment, legislators will

become more ideologically fluid in their behavior (Wright and Schaffner, 2002).

Masket (2011) describes IPOs, which utilize the partisan infrastructure to exert their localized influence in the legislature. Imagine a world in which the umbrella infrastructure is absent. The fragmented IPOs are left to influence legislators within their local networks, without a larger organization to enforce structure upon diffuse interests. This should result in less structured chamber-level behavior since legislators will be following their more localized preferences. In other words, when the established party label is removed, less certainty exists in terms of the party's ability to reward and punish. If this is correct, then eliminating established party labels from ballots and chamber caucuses will disturb the predictable behavior of legislators. The major parties will have lost their power to unify individual legislators.

Based on the discussion of how parties influence legislative behavior in general and in Minnesota in particular, I formulate the following hypotheses:

Pre-Test Hypothesis: Because controlling nominations, procedural rules, agenda access, and constituency communication are vital components of party power, partisan identity in the partisan 37th Session will exhibit significant predictive power over both first and second dimension ideal point estimates.

Post-Test Hypothesis: Because controlling nominations, procedural rules, agenda access, and constituency communication are vital components of party power, partisan identity in the non-partisan 39th Session will exhibit no effect over first or second dimension ideal point estimates.

Data and Methodology

In order to take advantage of the unique opportunity to test party influence in the context of a natural experiment presented by the 1913 Minnesota Legislature, I collect roll call data for the 37th and 39th Sessions. I compare party influence on 1st and 2nd dimension W-NOMINATE ideal point estimates. To code for party identification in the post-partisan era, I assigned partisan affiliations

from previous elections or coded them as non-partisan if they had no prior election experience. I collect two Census-based measures of urban/rural character. Using these variables, I perform an analysis of party influence by regressing ideal points on partisan identity and district urban character.

Jenkins (1999) compares the U.S. House to the non-partisan Confederate House revealing less partisan influence in the Confederate House than in the U.S. House. Wright and Schaffner (2002) take advantage of similar comparable cases with institutional variation on partisanship in Nebraska's non-partisan unicameral chamber and the partisan Kansas Senate. They demonstrate lower dimensionality in Kansas than in Nebraska. They assert that because parties provide structure to otherwise discordant politics, party influence is observed in chambers allowing party organizations (U.S. House and Kansas Senate) and not in similar, but non-partisan, chambers (Confederate House and Nebraska Legislature). Masket (2012) had limited success in examining Minnesota's switch from non-partisan to partisan in the 1970s. He found that polarization increased over two decades surrounding the 1975 switch back to partisanship, but no instantaneous effect in the years immediately preceding and following the switch. The diffuse findings were in part due to the fact that Conservative and Liberal caucuses within the legislature had assumed partisan responsibilities. Another reason for the lack of change in partisan influence across this period is likely due to the presence of anticipation of the re-adoption of the partisan model. The present analysis seeks to avoid this issue by examining the surprise elimination of parties. More importantly, the present analysis maintains a level of internal validity due to the ignorance among pre-test subjects about the impending abolition of party organizations.

The present analyses assesses two House sessions, one under the partisan regime in the 37th legislature and the other under the non-partisan regime. The Law Library Microform Consortium (LLMC) contains PDF versions of the legislative journals for these sessions. Because the vote to remove parties occurred in the 38th Session, I record all roll call votes from the 37th Session (one election cycle prior to the treatment) and the 39th Session (the first non-partisan election cycle after the treatment). In order to assess partisan constraints on legislators, I examine the dimensionality of roll call votes in each session, evaluate the extent to which party affiliation predicts ideal point

estimates before and after the treatment, and the distribution of freshmen ideal points along first and second dimensions in each session.

The dependent variables are ideal point estimates from 1st and 2nd dimensions of W-NOMINATE procedures applied to each session in the analysis. All floor votes in which at least 2.5% of votes were on the losing side are included in the analysis, so long as the losing side contained multiple votes. The 37th Session contained 265 votes of these votes and the 39th contained 299 votes. Other summary statistics for these ideal point estimates are contained in Tables 1 and 2. For the 37th Session I code legislators' party identification according to the party listed on the election ballot. For the non-partisan 39th, I coded partisan identities for those members who had previously been elected on a partisan ballot or had a strong history of a single-party election in their district,[4] and as non-partisan otherwise. For example, some legislators had served in other partisan offices and so they received the designation under which they ran in those elections to indicate enduring party loyalty.[5] Others were more difficult. S.D. Baker, for instance, was elected to only one term (the 39th) and searches into his political past produced no partisan election information. In this and other similar instances, I searched the history of the district. If the county/district in question elected a member of the same party in the five sessions (10 years) prior to the 39th, then I artificially designated the representative as a member of that party. For example, I coded Baker a Republican since the last non-Republican elected to that seat occurred in 1891, more than two decades prior.[6]

[4]For those 18 members who had strong histories of partisanship in their districts, but were elected to their first terms in the non-partisan 39th, I coded them as partisans for two reasons. First, constituency expectations were strongly partisan and aligning themselves with know same-party legislators would have been encouraged. Second, IPOs responsible for nominating legislators were not banned and thus remained the same. In a strong partisan district, the expectations for the nominee were to remain loyal to the IPO's partisan goals.

[5]Legislators' previous party affiliations were noted on the Minnesota Legislature's very informative website.

[6]There were 17 members who were elected to their first term in the 39th, but for whom I coded a party designation based on the strong historical partisanship of the counties they represented. There were 66 members who were coded "N" for non-partisan because historical data could not determine a likely party designation. Even when party is coded strictly according to whether the legislator has been elected previously on a partisan ballot, the results are similar. See Appendix C for rationales on specific coding decisions.

In instances of mixed electoral history and unverifiable political history, I coded no party affiliation. These non-partisans form a baseline in the non-partisan model. There were 86 Republicans and 26 Democrats in the 37th Session. In the 39th, there were 68 Republicans, 12 Democrats, and 48 non-partisan members. Table 3 contains summary statistics for partisan makeup and district urbanism measures.

Table 1: Summary Statistics: 37th Session

Variable	Mean	Median	Std. Dev.	Min	Max
1st Dimension Coordinates	-0.053	-0.088	0.492	-0.918	0.881
2nd Dimension Coordinates	-0.019	0.084	0.531	-0.999	0.999
Urban	0.317	0	0.465	0	1
Urban Scale	1.975	1	1.351	1	4

Note: N = 119

Table 2: Summary Statistics: 39th Session

Variable	Mean	Median	Std. Dev.	Min	Max
1st Dimension Coordinates	0.037	0.020	0.492	-0.999	0.955
2nd Dimension Coordinates	-0.001	-0.385	0.531	-0.998	0.999
Urban	0.354	0	0.465	0	1
Urban Scale	2.046	1	1.351	1	4

Note: N = 130

Table 3: Summary Statistics

Variable	37th N	39th N
Republican	89	68
Democrat	26	12
Prohibition	4	1
Socialist	1	
Never Partisan	0	66
Freshmen	73	75
Urban	38	46
Urban Scale=1	76	79
Urban Scale=2	6	5
Urban Scale=3	3	7
Urban Scale=4	35	39

Note: 37th Total = 119, 39th Total = 130

The best available measure of the urban/rural divide comes from 1910 Census data at the county and city levels. Because Haines (1911) usefully supplied county and city affiliations I am able to

construct two measures of district urbanism: 1) a dichotomous measure of urban=1 (if it is a Haines-described city district or part of tri-county delegation making up the three largest counties) and rural=0 (if it is not a Haines-described city district)[7] and 2) I code the member's designation according to the following ordinal population scale: 4=largest township in district over 100,000, 3=largest township in district between 50,000-100,000, 2=largest township in district 25,000-50,000, and 1=largest township in district less than 25,000.[8]

Results

In this section, five indications of party influence are compared between the two sessions: 1) a measure of the percent correct classifications of votes by the 1st and 2nd dimension, 2) aggregate proportional reduction in errors for 1st and 2nd dimensions, 3) geometric mean probabilities for both dimensions, 4) a comparison of the distribution of 1st dimension ideal point estimates by freshman status and a comparison of the distribution of 2nd dimension ideal point estimates by freshman status, and 5) regression models predicting W-NOMINATE scores using party identification and urban districts. Percent correctly classified (PCC) provides a measure of each dimension's performance in predicting how a legislator will vote. For the 37th Session, W-NOMINATE's 1st dimension correctly classified 83.4% of votes and its 2nd dimension correctly classified 85.6%. For the 39th Session, W-NOMINATE's 1st dimension correctly classified 80.9% of votes and its

[7]Similarly, for the 39th Session I utilize the Buell (1915) legislative history document that is a corollary to Haines.

[8]In coding these variables, I made three exceptions. First and second, representatives from Washington and Anoka counties contained over 250,000 residents even though no single city surpassed the 25,000 threshold. These counties boarder the high population density tri-county area and are themselves geographically small compared to other counties statewide. As a result, these were given urban=1 and urban scale=3 designations. Third, Dakota County also boarders the tri-county area and contains a city between 50,000-100,000 and is geographically small. Dakota County received an urban=1 and urban scale=4 as a result. Fourth, Clay county boarders Fargo, ND and has a county population of 100,000-200,000.

2nd dimension correctly classified 82.8%.[9] As expected, legislators elected to their first terms in the 37th Session have discernible partisan differences to those elected to their first term in the 39th Session. Additionally, it was more difficult to predict legislators' voting patterns in the non-partisan 39th than in the partisan 37th. A similar pattern emerges in the other assessments of party influence outlined below.

Figure 2 displays visual representations of voting patterns by party in each session. In contemporary American politics, this type of figure would display two primary clusters of legislators, one for Republicans and one for Democrats. However, issue-based politics are historically more complex and cut across party lines. In in the early part of the twentieth century, Minnesota was not immune to the Progressive nor the Prohibition movements occurring across the U.S. political landscape. As a result, we see less partisan clustering than in modern American legislatures. In fact, judging based on the spatial position of the handful of Prohibition Party legislators in the 37th, the first dimension pits dry and wet legislators against one another. In general, the 37th looks more clustered by party than the 39th, particularly among Democrats.

Aggregate proportional reduction in error (APRE) is calculated by subtracting classification errors from minority vote totals and dividing by minority vote total. Thus, larger values denote better spatial predictions. The idea is to measure how well the spatial dimension (here it is either first or second) predicts how a legislator votes. Rather than do this by simply guessing a legislator will vote with the majority, and thus being correct a large percentage of the time due to lopsided votes, this approach sets a higher standard by predicting minority votes. APRE, therefore, accounts for lopsided votes. APRE for the 37th was 0.321 for the 1st dimension and 0.413 for the 2nd. APRE for the 39th was 0.299 for the 1st dimension and 0.367 for the 2nd. Along both the 1st and 2nd dimensions, voting behavior in the partisan era is more predictable than in the non-partisan era. Although the differences are small, they are consistent across all four measures.

Geometric mean probability (GMP) measures the extent to which roll calls can be divided

[9] Also, notice that the 2nd dimension improves the classification rate by only a small percentage. As a result, I present results from only two dimensions here.

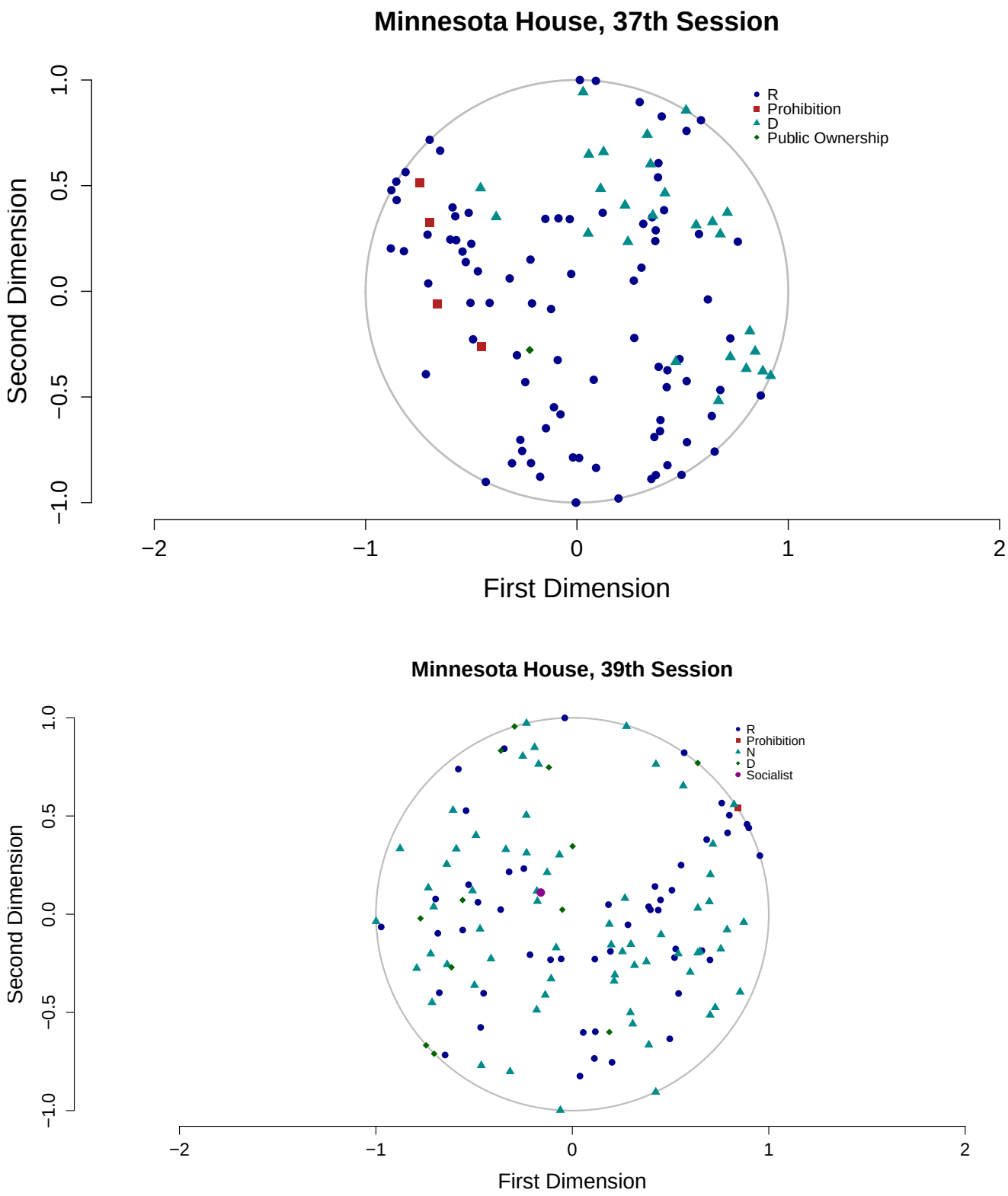


Figure 2: Plotted W-NOMINATE Coordinates by Party

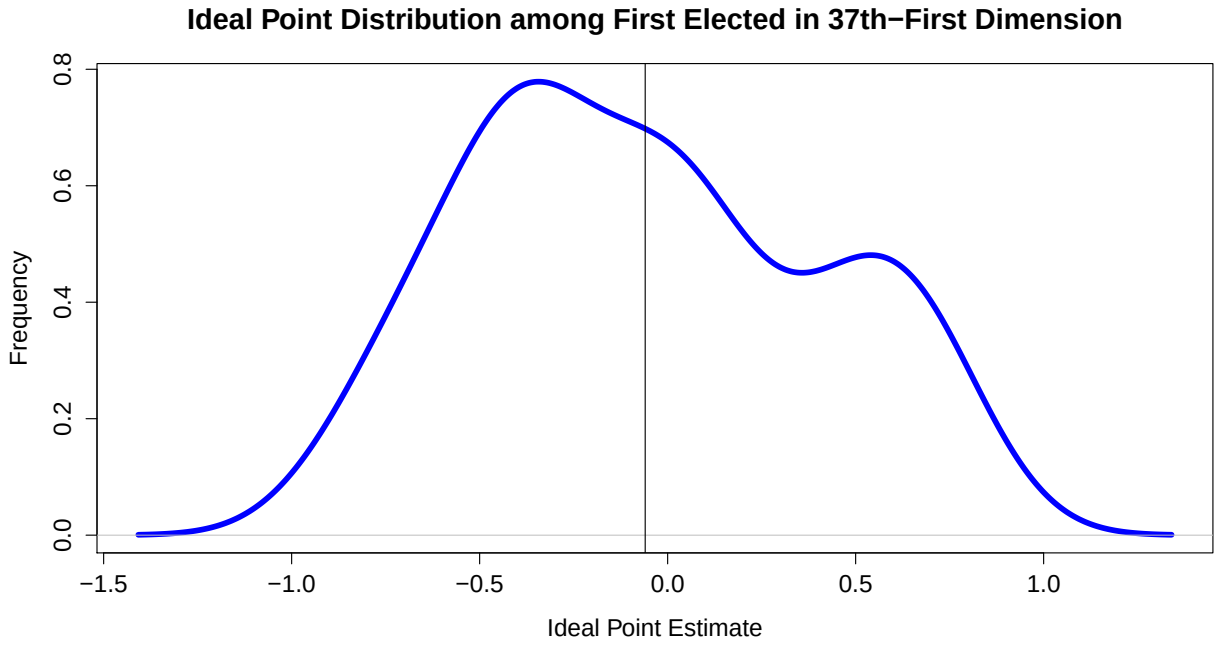
Table 4: 1st- and 2nd-Dimension Spatial Fit Statistics

Session	Dimension	PCC	APRE	GMP
37th Partisan	1st	83.35	0.321	0.688
39th Non-Partisan	1st	80.94	0.299	0.653
37th Partisan	2nd	85.61	0.413	0.723
39th Non-Partisan	2nd	82.80	0.367	0.684

based on either the 1st or 2nd dimension. It is calculated by taking the exponential of the average log-likelihood of a legislator voting yea or nay based on W-NOMINATE's prediction of how a legislator will vote. Larger GMPs indicate that vote choice is more predictable using the dimension in question. The far-right column in Table 4 shows the predictability of votes using 1st and 2nd dimensions is lower in the 39th than in the 37th, as expected. Again, these differences are meager, but stable.

To assess how partisan elections affect chamber-level partisanship, I compare the distribution of ideal point estimates for freshman legislators in each session. Figures 3 and 4 display these distributions for both first and second dimension W-NOMINATE scores. This distribution should approximate a normal distribution on dimensions absent party influence and it should approximate a bimodal distribution, peaking on either side of the mean, on dimensions in which parties exert their influence on legislative roll call decisions. Notice in Figure 3, the distribution of ideal points on the first dimension is less bimodal in the 37th than in the 39th (the opposite of what we would expect in a partisan dimension). Remember, the first dimension is heavily influenced by the prohibition issue. The most likely explanation for this distribution is the divisiveness of the wet/dry issue. Given that liquor legality was a highly salient and divisive issue, this result is not surprising. Because the second dimension classifies about the same number of votes as the first dimension, the second dimension distribution provides an additionally useful reference for partisan effects. Figure 4 displays a stark difference in the distributional shape of the the ideal point estimates. In the 37th Session, the distribution is similar to what we expect from a partisan dimension and in the 39th Session it approximates a normal distribution, indicating that the two major parties have exerted considerably less influence on the structure of the roll call votes.

The analysis presented in Table 5 demonstrates support for the hypotheses above. As expected,



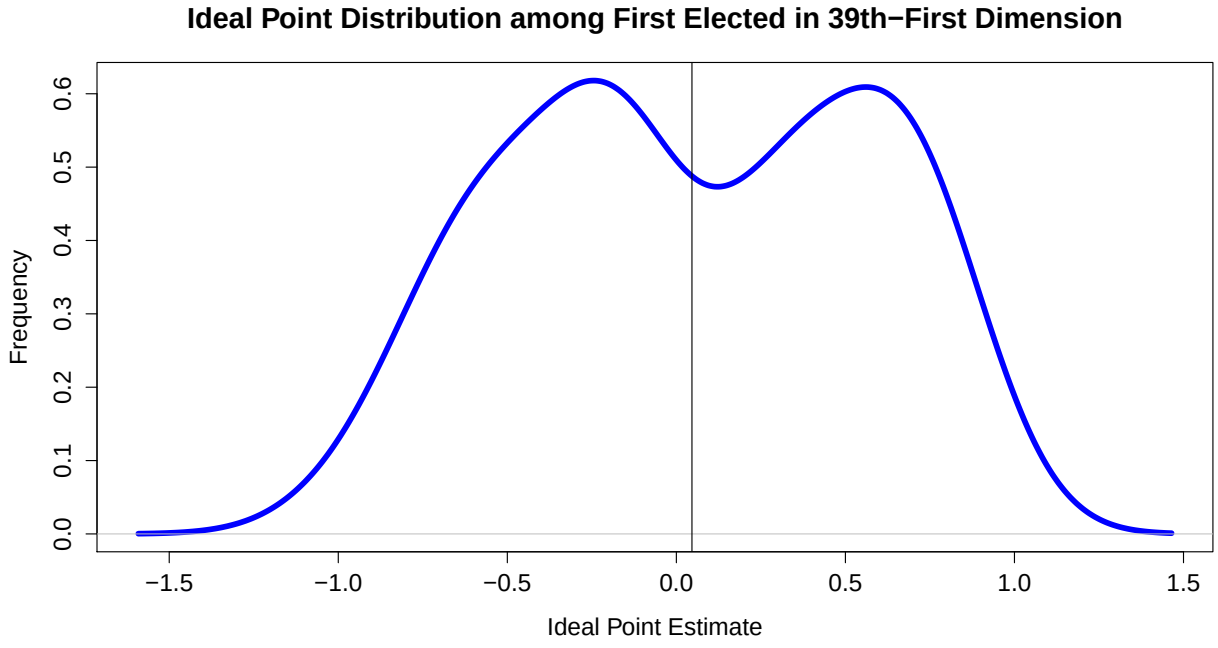


Figure 3: Distribution of W-NOMINATE Coordinates

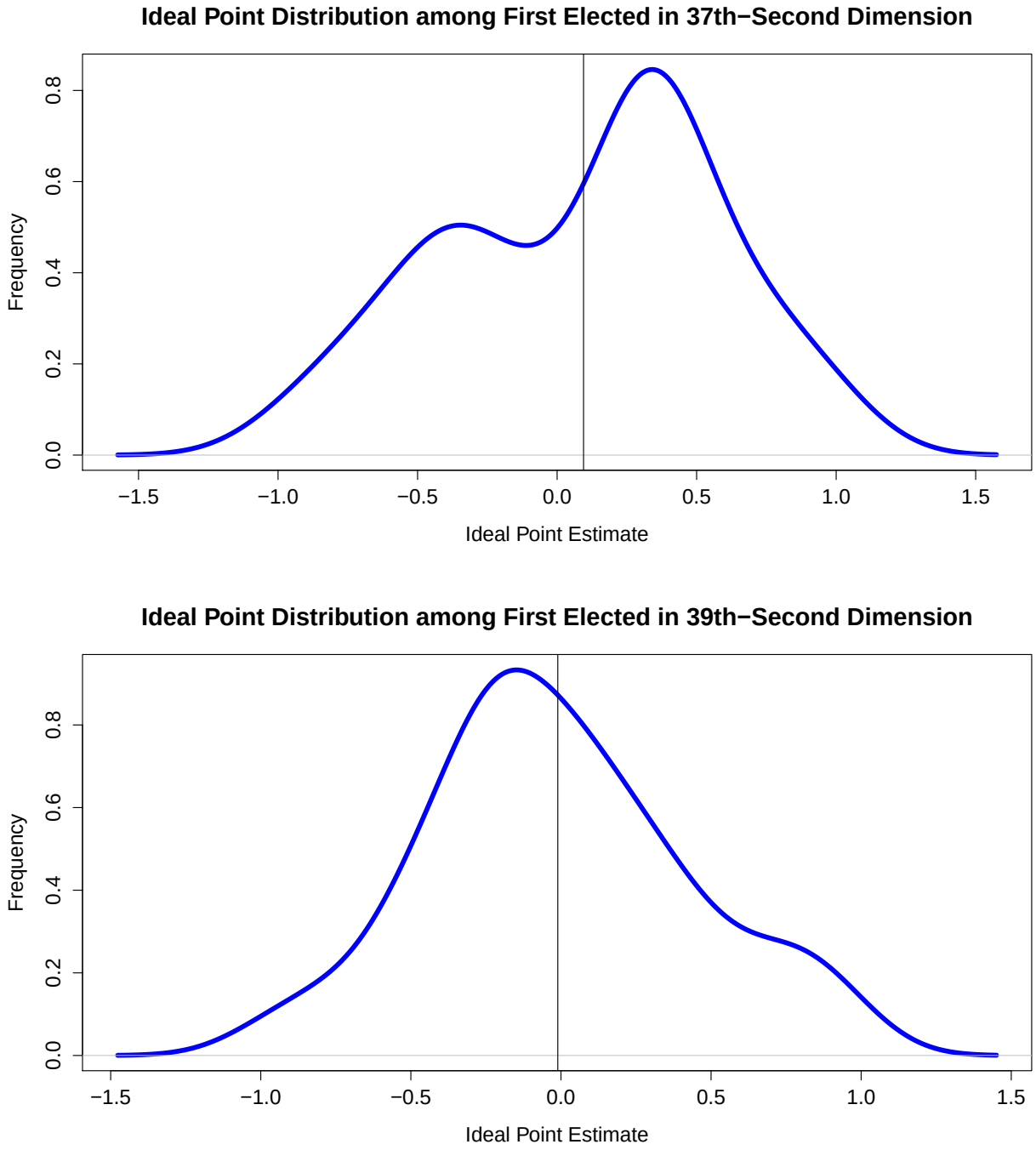


Figure 4: Distribution of W-NOMINATE Coordinates

Republican Party affiliation, relative to Democrats, in the pre-test period (37th) significantly increases first dimension ideal point estimates by about 0.24 and second dimension estimates by -0.34. In the post-test period (39th), In the post-test period, I expected to find null associations between party affiliation and ideal point estimates on both dimensions. This was indeed true for both parties on both 1st and 2nd dimensions, relative to their non-partisan counterparts. The differences between partisan and non-partisan chambers here is clear. Partisanship predicts ideal point estimates in the partisan 37th Session, but not in the non-partisan 39th Session.

Table 5: OLS Results

	Dependent variable:			
	1st Dimension Coords 37th	1st Dimension Coords 39th	2nd Dimension Coords 37th	2nd Dimension Coords 39th
Republican	0.421^{***}	0.234^{***}	-0.339^{***}	-0.107
	(0.090)	(0.090)	(0.096)	(0.089)
Prohibition	1.015^{***}	0.563^{***}	-0.153	-0.116
	(0.216)	(0.079)	(0.232)	(0.078)
Socialist	0.929^{**}	0.348	-0.066	0.285
	(0.414)	(0.432)	(0.443)	(0.429)
Never Partisan		0.176^{**}		-0.075
		(0.087)		(0.086)
Urban Scale	-0.146^{***}	-0.072^{***}	-0.219^{***}	-0.156^{***}
	(0.028)	(0.028)	(0.030)	(0.028)
Constant	-0.119	-0.222^{*}	0.666^{***}	0.450^{***}
	(0.097)	(0.117)	(0.103)	(0.116)
Observations	119	130	119	130
R^2	0.358	0.379	0.368	0.205
Adjusted R^2	0.335	0.354	0.346	0.173
Residual Std. Error	0.403 (df = 114)	0.420 (df = 124)	0.431 (df = 114)	0.418 (df = 124)
F Statistic	15.890^{***} (df = 116)	15.160^{***} (df = 124)	16.62^{**} (df = 116)	6.410^{**} (df = 124)

Note: *p<0.10; **p<0.05; ***p<0.01

Discussion

Evidence from this experiment suggests that parties do influence legislative behavior. While the differences in party influence between the partisan 37th Session and the non-partisan 39th Session are modest, they persist across all five assessments of party influence presented above. Upon further examination of non-partisanship in Minnesota, I suspect that research, in at least two respects, will indicate even stronger evidence of the absence of party organization. First, moving forward in time replicate analyses will demonstrate stronger results. Due to the power inherent in the ability to select which candidates initially run for a given seat via the nominations process, it could take more than one session for the full effect of abolishing parties to take hold. As incumbents initially elected under the partisan regime turnover to legislators elected under the non-partisan system, one might expect to observe less vote predictability. As a result, extending the data set forward in time to cover successive legislative sessions may well reveal the full effects of non-partisanship in historically party-dominated political processes. Second, research examining the partisan composition of committees would bolster the experimental evidence presented here. Party organizations within legislatures often stack standing committees with majority party members in order to better control the legislative process. With partisan chamber caucuses disallowed from organizing legislators, one expects to observe less stacking by chamber leaders. In particular, the ability to assign committee members will become a more important tool for leaders who have fewer traditional partisan tools such as nomination control. By leveraging the surprise nature of the removal of parties from the political process in Minnesota in 1913, this research demonstrates that party organizations rely on their "brand name," chamber caucus procedures, and power over the nominations process to discipline their members. The evidenced discussed above suggests that, all else equal, the presence of parties in the political process structures how elected representatives cast their votes.

Chapter 2 - The Impact of Income Inequality on Legislative Consistency: Evidence from the U.S. Senate

Representative democracy requires that constituents evaluate office holders and make a decision on whether to reelect them. Citizens are best able to judge an incumbent's ability to represent their attitudes and preferences when the incumbent has presented a consistent record while in office. Less consistent representative generate messages associated with a large degree of uncertainty making the job of the voter more difficult. Many factors may affect the consistency of a legislator's voting record. For instance, legislators often face the decision of whether to vote in accordance with or adverse to their party's position on roll-call votes. Previous work has identified several reasons why some legislators choose to vote against their party more than others. Among the most important predictors of this choice are majority leadership power (Cox and McCubbins, 1993) and electoral competition (Carroll and Eichorst, 2013). The present paper identifies an additional influence on legislative roll-call consistency, economic inequality. Because wealthy citizens impact the political process more than average or poor citizens, affluent political preferences are better represented in American politics (Gilens, 2005). High inequality implies few rich citizens. When there are few affluent constituents legislators will be more certain about how vote on legislation. Conversely, when legislators must satisfy many affluent constituents, there will be a greater variety of interests to support and a greater likelihood that those interests conflict with the party position. As a result, legislators will be most predictable when inequality is high and least predictable when economic resources are more evenly distributed. The combination of this consistent record and the disproportionate impact of high income citizens on the reelection prospects of seated legislators helps explain the high rate of incumbency victory in congressional elections.

Florida Senator Marco Rubio's rise through state-level politics came with the support of one political benefactor, Miami billionaire Norman Braman. Braman backed Rubio in each of his four successful bids for the Florida legislature in 2000-2006.[10] In 2004 Governor Jeb Bush vetoed state funds for the Braman Cancer Center, for which Rubio had been a key ally in the statehouse. Upon

[10]See followthemoney.org/entity-details?eid=12999040.

winning the speakership in the subsequent legislative session, Rubio ensured the funds would be restored. The political duo also held a mutual desire for a decreased property tax plan that Rubio helped pass in the Florida House. When the Rubio family fell upon financial hardship once Marco termed out of his seat in the Florida Legislature, Braman assisted by supplying funds to a Florida university for a lecturer appointment Rubio would hold and hiring Jeanette Dousdebes (Rubio's wife) at his non-profit. Today, early indications are that Braman will be the single most important contributor to Rubio's 2016 White House bid, at least in the crowded Republican primary.[11] Clearly, this personal relationship between constituent and politician has produced a loyal relationship. If Braman is among a small number of Rubio benefactors, then Rubio's voting record should be predictable. When legislators have many political benefactors vying for representation, they should behave in a manner that is less predictable.

This paper explores the impact of income inequality on legislative consistency. When inequality is high, few constituents hold most of the political resources and this leads to greater certainty among legislators about how they ought to vote on legislation. First, I explore evidence suggesting that some citizens have more influence over their representatives than other citizens. Next, I propose a theory explaining how districts where few citizens hold most of the income have more predictable representatives than districts where income is evenly distributed. The resulting hypotheses are tested using U.S. Senate roll-call data to construct measures of legislative consistency and U.S. Census data measure income inequality in the U.S. states, among other important predictors. The results indicate that income inequality does in fact lead to more predictable legislators. Finally, I conclude with a discussion of the implications of these findings for representation in American legislatures.

Legislative Representation on Roll-Call Votes

In general, legislators in a representative democracy listen to their constituents. Legislatures tend to move policy toward the preferences of the aggregate constituencies that elect their members (Stimson, Mackuen and Erikson, 1995; Shapiro, 2011). Butler and Nickerson (2011) further demonstrate that when individual legislators learn public opinion of their districts, they respond by voting ac-

[11] Background information for this anecdote can be found in Appendix C.

cording to constituent preferences. Similar patterns of representation have been found following constituency signals (Kousser, Lewis and Masket, 2007). Another perspective views representation as a function of selection rather than sanction. In this view, constituents elect legislators who match their preferences and this explains the relationship between constituency and representative Ansolabehere, Snyder and Stewart (2001); Gartner, Segura and Barratt (2004). In both the sanction and selection views, legislative behavior is a function of constituent preferences.

Some legislators, however, behave differently than others depending on the amount of heterogeneity amongst their constituents. Subconstituencies, including core supporters, swing voters, and opposing-party moderates influence legislators as they cast roll-call votes (Bishin, 2000). Evidence suggests that diverse constituencies lead to less predictable legislators (Bailey and Brady, 1998). Moreover, heterogeneity in constituent preferences conditions legislators' reliance on constituency versus party influence (Harden and Carsey, 2012). As a result, legislative behavior differs according to the degree to which districts are comprised of diverse populations.

It is also evident that legislators represent subsets of their constituency according to the strength of support they receive from particular stakeholders in those subgroups. These groups tend to consist of highly influential members of wealthy well-educated social circles that have the ability to mobilize voters (Rosenstone and Hansen, 2003). By prioritizing the satisfaction of these affluent constituents, legislators secure key reelection resources among high income constituents including the higher likelihood of turning out to vote, campaign contributions, and the ability to reward donors and campaign activists through the revolving door (Bonica, McCarty, Poole and Rosenthal, 2013). As a result, legislative roll-call behavior is influence d the most by those who occupy the upper echelons of the income distribution.

If rich constituents have greater impacts on their legislators than poor constituents, then income inequality in a legislative district should influence the representative's roll-call decisions. Bartels (2008) demonstrates greater response to rich constituents than to poor constituents among U.S. Senators and Garand (2010) articulates the argument that constituency income inequality affects

legislators' ideology through its polarizing effect. Together, this research suggests that income inequality leads legislators to focus their representative efforts on fewer, richer, and more homogeneous sets of constituents. Other studies have found policy responding especially to changes in preferences of the wealthy class (Gilens, 2005) as well as those of business oriented interest groups (Gilens and Page, 2014). This suggests that legislators favor those with more economic resources over those with fewer economic resources. As Fenno (1978) infers, legislators tend not to take singular broad-based views of their constituencies, rather they hold nuanced perspectives about which constituents matter most for reelection purposes. I provide an explanation below suggesting that this nuanced view of constituency, combined with income inequity, leads legislators to more consistent roll-call behavior.

A Theory of Income Inequality and Legislative Consistency

In this section I explain how legislators conceptualize their constituencies and how this affects their vote choice on roll-calls. I argue that legislators will behave more consistently on roll-call votes when their constituencies have high degrees of inequality because rich citizens are more politically powerful than poor citizens. Those constituents with greater political resources, namely money, have greater impacts on their representatives than those with fewer resources. When there are few individuals holding most of the resources, legislators should care more about those narrow set of constituents' preferences than the constituents with a dearth of resources. Before explicating this theory further, two elemental concepts warrant description.

First, *income inequality* is taken here to indicate the extent to which total income is distributed unevenly across a population. A district experiencing the most inequality has a single citizen receiving all of the income and a district experiencing the least inequality will have a perfectly even distribution of the total income. Second, *legislative consistency* references the extent to which a legislator casts predictable roll-calls. A consistent representative's roll-call votes will be easy to predict while an inconsistent legislator will have more prediction errors.

There are a number of assumptions requisite to explain the connection between income inequality and legislative consistency. To start, legislators consider whether the policy outcomes of proposed legislation have implications for the preferences of their constituents (Mayhew, 1974; Fenno, 1977; Wright, Erikson and McIver, 1987; Stimson, Mackuen and Erikson, 1995).[12] Some individuals possess other sources of clout over the actions of the legislator, such as funding for campaigns in primary and general elections (see the Rubio/Braman anecdote above), advisory influence, and leverage over the nomination process (Masket, 2011). These tend to be the constituents who make up the social circles closest to the representatives, namely those with large incomes (Gilens, 2005, 2012; Jacobs and Page, 2005). When given the opportunity, congressional candidates even seek out wealthy citizens to bring into their constituency because of the electoral benefits they are likely to bring (Kirkland, 2012).

I argue that legislators whose constituents have disproportionately unequal incomes will have more consistent roll-call behavior because the quality and quantity of reelection resources held by affluent constituents are greater. High income citizens are more likely to participate in the political process and they possess the ability to do so in ways that allow them to clearly express their policy positions to their representatives. These attributes and established lines of communication place high income constituents in the primary (and some directly into the personal) constituency. This directly implies a second assumption: members of the primary constituency possess pathways into the personal constituency that reelection and geographic constituents do not. This occurs through their network of political contacts. Primary constituents may become personal constituents by establishing contact with large donations that often come in the form of meet-and-greet sessions (e.g. dinner fundraisers) with the representative. Legislators also retain contacts from previous professional endeavors in their districts and these experiences typically involve opulent individuals. Thus, those constituents with larger incomes occupy the space most proximate to the legislator in terms of access to the ear of the representative.

[12] Fenno (1977, 1978, 2007) and others argue that representation is conceptually much larger than roll-call voting, but it is one facet of congressmen's capacity to represent. This is addressed in more detail in the Discussion section.

An exploration of supporting evidence for these assumptions is in order. Verba, Schlozman and Brady (1995) note that affluent citizens participate in politics more than poor citizens. This includes voting, campaign activism, contacting public officials, and donating money to campaigns. In other words, successful campaigns should value high income voters more than low income voters.[13] Constituents with larger incomes are also more politically efficacious, both internally and externally, and this especially the case among voters (Dyck and Lascher, 2009). That is, high income citizens believe they can both comprehend politics and impact political outcomes more than low income citizens believe that they posses the ability to affect the political process. Furthermore, Senators tend to represent voting constituents more than non-voting ones (Griffin and Newman, 2005). Together, these observations about the nature of the relationship between constituents and their representatives suggests an affluent skew such that constituents with large incomes have decidedly greater impacts on how legislators behave than low-income constituents.[14]

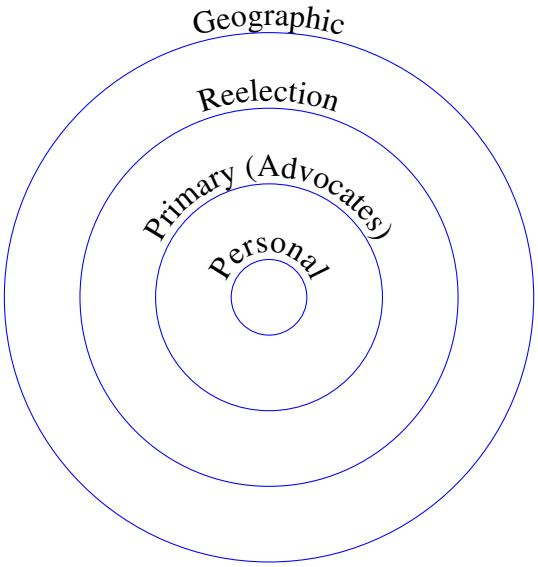
Legislators and Their Constituencies

Fenno (1978) portrays the sources of influence on legislator's actions as a "nest of concentric circles" around the legislator at the center. Figure 5 visualizes this arrangement, consisting of four rings surrounding the legislator. First, the largest circle in circumference is the voting constituency

[13]It has been suggested in the past that rich voters are more likely to participate in primary elections (Ranney, 1972), but it is unclear whether this is a permanent feature of American elections.

[14]The argument proposed here rests in part on identifying the sources of a legislator's campaign contributions. Some campaign donations come from citizens who are not constituents in the legislator's district. However, evidence suggests that the likelihood of donating to a campaign increases by 1/3 among constituent donors over those outside of a legislator's geographical constituency (Francia, Green, Hernson, Powell and Wilcox, 2003). While a plurality of a campaign's donations may come from outside of the district, it can be politically costly to prioritize those outside interests. Thus, there is little reason for concern that these campaign contributions confound the core argument in this paper.

Figure 5: Fenno's Concentric Circle Constituencies



that reside within the geographic borders of the district. Second, the most consistent reelection voters make up the next ring inward. The third smallest ring consists of the most ardent supporters, such as those who actively advocate during the primary elections. Fenno refers to these constituents as the "primary constituency." For the present purposes, I refer to them as "advocates" in order to emphasize their high degree of participation in the political process. Finally, the most proximate ring to the legislator includes those individuals with the most privy interpersonal relationship with the representative.

Suppose the personal constituency and the advocates are made up of decidedly more rich citizens than those occupying the reelection and geographic constituencies. In this circumstance, legislators would be most responsive to the monied constituents because they control effective reelection resources, such as campaign donations and personal networks with the ability to mobilize voters. This is an outgrowth of the notion that legislators weigh the likelihood that voters will exercise their knowledge of a legislator's roll-call behavior in the next election Arnold (1990). These financially well-off and politically active constituents would have patently more influence on the behavior of their legislator than would poor residents because legislators understand the relative political power of rich constituents over poor constituents. This suggests that those individuals occupying the most proximate circles to the representative will have the most impact on legislative

roll-calls.

Inequality and Legislative Consistency

The key theoretical mechanism proposed in this explanation of legislative roll-call behavior is that legislators are mindful of the wishes of constituents and legislators pay more attention to constituents with greater resources to contribute to their political futures. Because high income individuals enjoy the ability to access their representatives to a greater extent than low income individuals, a legislator will have greater clarity about her policy positions when there are few opulent and many poor constituents. That is, inequality increases certainty among legislators because they have fewer constituents to be concerned with and more information about those constituents' preferences. If the scholars who indicate that income inequality leads to better representation of those with large incomes over those with small incomes (Gilens, 2005; Jacobs and Page, 2005) are correct, then income inequality should lead to greater roll-call consistency among legislators with greater income inequality in their constituencies. In other words, representatives whose constituents are highly unequal will not "lump" or "split" their views of their constituencies in the way that Druckman and Jacobs (2006) suggest. Instead, they will largely ignore the preferences of their mass-based constituents in favor of those who occupy the upper-most echelon of the income distribution because those are the constituents who provide the most campaign resources. Rather than checking opinion polls before voting on legislation, legislators put to use the information about policy preferences gathered through direct contact between the legislator's office and the personal and advocate constituencies.

To illustrate the main argument, Figure 6 plots the number of constituents across the percentage of a legislator's campaign cash donations in a hypothetical district. In the low inequality district, legislators have large portions of their constituency making up most of their total campaign contributions. Representatives in low income districts will be less consistent on roll-calls as a result of having more individual preferences to consider. In the high inequality district, legislators have only a few constituents making up most of their campaign contributions. Representatives in unequal

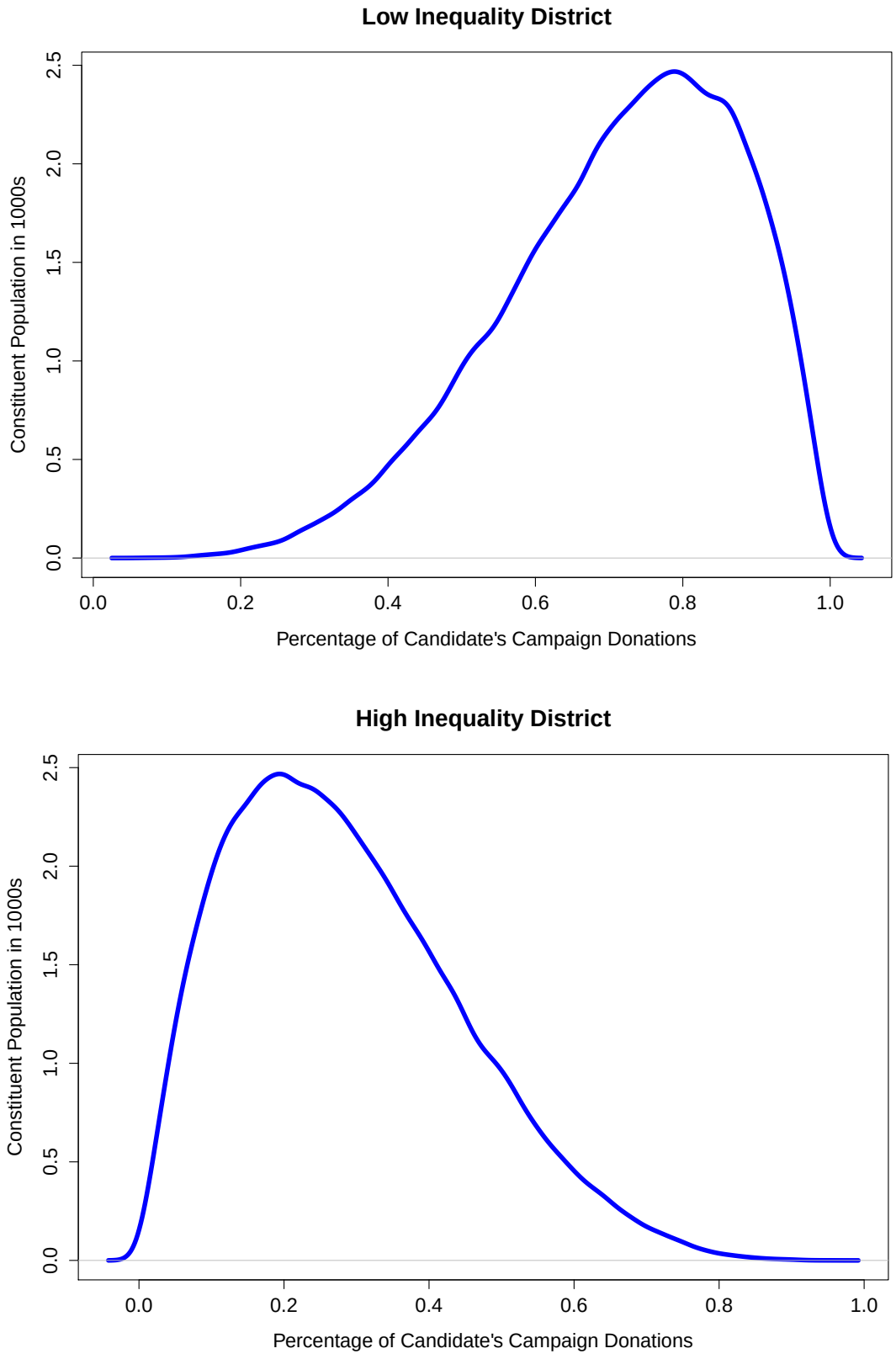


Figure 6: Distribution of Campaign Contributions From Hypothetical Legislators' Districts

districts will vote with greater consistency as a result of having fewer preferences to consider. Legislators representing constituencies with large degrees of income inequality are most certain about how to vote on roll-calls because their primary support network is smaller than those with more equal income distributions. High income citizens have disproportionate power over politicians and when there are fewer rich citizens, legislators will have fewer preferences to satisfy. *Hypothesis 1*: Income inequality will have a negative effect on the number of errors made in roll-call vote predictions.

A predictable representative provides a clearer message to constituent investors than a less predictable one. Whether the investors are voters, interest groups, or other political collaborators, a legislator with consistent roll-call votes is a valuable commodity. It is easy to decide the amount of resources one wishes to invest in their representative when the legislator has a consistent record because the expected return on investment will have greater certainty associated with it. Because legislators seek to satisfy their constituents' preferences, they will establish a predictable voting record when there are fewer viewpoints to satisfy. While roll-call behavior is a function of constituent preferences, party power, and margins of electoral victory, I argue that the consistency of a legislator's roll-call behavior is also a function of income inequality.

Alternative Explanations

There are a number of other factors in a legislator's roll-call calculus that affect their consistency. For instance, legislators are constrained by the party apparatus and its leadership in their chamber (Cox and McCubbins, 1993; Carsey and Rundquist, 1999), although this effect is muted to an extent in the U.S. Senate due to its rules favoring individual members' rights (Sinclair, 1989). Chamber leaders utilize a host of legislative resources to constrain the roll-calls of their members in order to pass policy (Nokken and Poole, 2004; Cox and McCubbins, 2005). One example is that majority parties enjoy agenda setting power. The ability to determine what legislation comes to the floor for a vote increases the roll-call predictability for majority caucus members. Members of the majority party tend to be more cohesive than those in the minority due to the majority's ability

to dictate the legislative process (Cox and McCubbins, 1994). Carroll and Eichorst (2013) further demonstrate this empirically and also find minority party members have less predictable roll-calls. In the empirical models below, members of the majority party should have greater consistency than members of the minority party for these reasons. *Hypothesis 2*: Being a member of the majority party will have a negative impact on the number of errors made when predicting legislators' roll-call votes.

Seat safety is an additional concern for legislators. The competitiveness of a member's district influences how she will vote on roll-calls because it signals the level of electoral threat he or she might experience in the next election. A legislator whose district is safe has more freedom to vote in a manner consistent with their most dedicated supporters. Legislators holding safe seats strive to maintain their advantage by continuing to behave more consistently in a way that satisfies constituents who helped them win election over other suitors (Fenno, 2007, p. 138), but this is especially the case for legislators who have recently been challenged in an election. Thus, the margin of victory in a legislator's most recent election will be associated with greater legislative consistency. *Hypothesis 3*: As the margin of victory in a legislator's previous election increases, the number of errors made when predicting legislative roll-calls will decrease.

Legislators are privy to other indicators of district heterogeneity such as ethnic and racial makeup, economic diversity, and variance in public opinion. Districts with large minority populations will lead legislators to vote with less consistency because there are a greater variety of preferences to consider. *Hypothesis 4*: Increases in a racial or ethnic minority's percentage of a state's population will be associated with more errors in roll-call predictions. Similarly, economic diversity in a district presents legislators with a variety of industry and labor interests to satisfy. Some districts contain businesses that operate in the same few economic sectors while others contain a myriad of business and labor interests. The level of economic diversity in a legislator's district will affect the number of interests she pursues in the chamber. When economic interests are homogeneous, legislators will vote in a predictable manner because it is relatively simple to ascertain the preferred policy positions of like-minded business and labor interests. As economic

interests diversify, legislators will become less predictable because it is more difficult to satisfy a greater variety of interests and it is more likely that those interests will compete with one another. *Hypothesis 5*: Economic diversity will increase the number of errors made when predicting legislative roll-calls. Finally, the public mood represents the preferences of the geographic constituency. When preferences are diffuse, representation of those preferences on roll-calls will be more heterogeneous, and thus more difficult to predict. *Hypothesis 6*: Increases in variance of public mood will be associated with increases in the number of errors made on legislative roll-call votes.

Data, Measurements, and Models

To test the hypotheses developed above concerning how constituency income inequality affects consistency on legislative roll-calls, I gather Census estimates of state-level characteristics and roll-call data from Voteview.com for U.S. Senators to construct measures of the key concepts. I predict legislators' roll-call consistency using their constituency's level of income inequality as estimated by Census Gini index estimates by state.[15] Observations range from 1989 to 2000. The 1990s provide a sample with variation across majority control of each chamber and with both parties occupying the Oval Office. The independent variables measuring state level concepts are collected from U.S.Census and FEC websites. Independent variables measuring legislator-specific concepts are gathered using the U.S. Senate website and supplemented using ballotpedia.org.

A consistent legislator's roll-call votes should be easy to predict because of the natural affinity a legislator possesses to vote with her party. Carroll and Eichorst (2013) define the concept as the extent to which "...frequent and dramatic changes in voting behavior undermine the value of the party label." In other words, the more often a legislator votes against her own party, the less predictable she is considered to be. Legislators more willing to nettle their copartisans are less predictable. They are inconsistent roll-call voters. In the analyses below, I choose a Poisson regression due to its interpretive appeal. I predict the number of errors made by the first dimension of a NOMINATE

[15]Income inequality measures of the high quality that Gini index provides are difficult to obtain at the sub-state level. Thus, I collect state-level data for U.S. Senate only.

estimation. This means that legislators with high consistency will have fewer errors and legislators with low consistency will have many errors.

The primary independent variable of interest is income inequality. I utilize Gini coefficients to measure this concept. Gini index estimates are available decennially through 1999 by the U.S. Census Bureau. I assign the 1989 inequality estimate to cases in the 101st through the 103rd Congresses and the 1999 estimate to cases in the 104th through 106th Congresses. Gini coefficients are ratios that measure the degree to which income (or any other tangible good) is unevenly distributed across a population. More specifically, values indicate the degree to which the actual distribution of income deviates from a perfectly equal distribution.[16]

Beyond the key independent variable, I also account for other variables that impact roll-call consistency. I follow Harden and Carsey (2012) in measuring the heterogeneity of state mood as the variance around estimates of state mood provided by Enns and Koch (2013). Margin of victory is calculated as the percentage point difference in statewide vote between the legislator in question and her closest challenger.[17] Majority status equals 1 if the legislator in question is part of the majority party in the Senate chamber during a given session and 0 otherwise. In this data set majority status changed from Democratic control in the 101st through the 103rd sessions to Republican control in the 104th through the 106th sessions, thereby providing variation in terms of majority control for individual observations.[18] To account for racial and ethnic heterogeneity in a state, I include population percentage measures for African Americans, Asians, Native Americans, His-

[16]A more detailed description with instructional examples of this measure are available here: http://www.unc.edu/ nielsen/special/s2/s2.htm.

[17]Where senators are appointed mid-term, the senator recording the largest number of votes is retained in the analysis. This occurred nine times in the period examined here.

[18]Richard Shelby-AL (Democrat to Republican 1994) and Ben Nighthorse Campbell-CO (Democrat to Republican 1995) switched parties during this period.

panics, and those identifying as other. White is taken as the baseline. I also include a measurement of diversity in economic interests in each state. To do this, I calculate Herfindahl scores using the number of employees in each industry area as defined by the 1992 Economic Census (101st-103rd Congresses) and the 1997 Economic Census (104th-106th Congresses). [19] The following equation is then used to calculate the values of the economic diversity variable.

$$Herfindahl Score = \sum_{i=1}^{n} s_i^2$$

s is the number of employees working in a particular industry and *i* represents a given industry.[20] Thus, the measure is equivalent to the summed total of the number of employees squared in each industry. This produces a total of 600 cases where the unit of analysis is a state's senator in each session of Congress from the 101st through 106th so that each state has two observations for each congressional session. A list of descriptive statistics for all variables in this chapter are contained in Table 6.

The dependent variable in Column 1 of Table 7 is a count of the number of classification errors made by the first dimension cut point of a NOMINATE estimation. Again, low values indicate consistent legislators and high values indicate inconsistent legislators. Poole and Rosenthal (1997) describe this measurement as "...reflect[ing] the degree to which a single dimension can correctly classify actual voting behavior." This is a valid measure of legislative consistency because it predicts consistency accurately for both extremist and moderate legislators. Extremists always toe the party line in a traditional proximity model context, but empirically some will vote with their party more consistently than others. To be clear, it is possible for a moderate and an extreme legislator to have the same error rates. For example, in the Senate data used here the most extreme legislator

[19] All values obtained from the June 2000 Issue (EC97X-CS2) of the U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau's Comparative Statistics report: 1997 Economic Census, Core Business Statistics Series in .pdf format.

[20] The industries are federal, state, and local governments, goods, mining, construction, manufacturing, service, trade, information, finance, professional business, education and health, leisure, and other.

Table 6: Descriptive Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Number Classifcation Errors	600	67.570	30.147	17	193
Percent Classification Errors	600	0.122	0.050	0.030	0.286
Gini Coefficient	600	0.438	0.024	0.390	0.500
Majority Status	600	-	-	0	1
Margin of Victory	600	0.213	0.180	0.000	1.000
% African American	600	0.098	0.094	0.000	0.360
% Asian	600	0.031	0.074	0.000	0.620
% Native	600	0.021	0.028	0.010	0.160
% Other	600	0.027	0.036	0.000	0.170
% Hispanic	600	0.066	0.082	0.000	0.420
Herfindahl Score	600	0.555	0.050	0.424	0.730
Mood Variance	600	45.741	18.261	4.761	136.049

is Jesse Helms in the 106th Congress whose absolute value of the first dimension NOMINATE score is 0.79 and Olympia Snowe in the 105th is nearly the most moderate legislator whose absolute value of the first dimension NOMINATE score is 0.08. 10% of Helms's votes are incorrectly predicted by the first dimension and 11% of Snowe's votes are correctly predicted by the first dimension. Extreme and moderate legislators can vote with the same degree of consistency. I predict the number of classification errors using a Poisson regression which assumes a distribution of the dependent variable based the Poisson count distribution.

To estimate a model in which the dependent variable is a positive value that is less than one, a beta regression is used because the outcome variable is constrained between 0 and 1. The particular beta regression I have chosen uses a logit link function to fit the model so that predicted values will only fall between 0 and 1. This model is an improvement over a standard linear model because such a model will produce predictions that are not possible under the 0 to 1 conditions imposed by the PCC measure. Additionally, the beta regression removes skewness and heteroskedasticity issues that are present in a linear model (Cribari-Neto and Zeileis, 2010). As noted above, I also present a count model in which the dependent variable is the number of classification errors (NCE) for interpretive convenience. One possible source of measurement error in NCE is the fact that some legislators vote more often than others and this will increase the likelihood that they have a greater number of prediction errors. The presence of this potential bias is accounted for in the

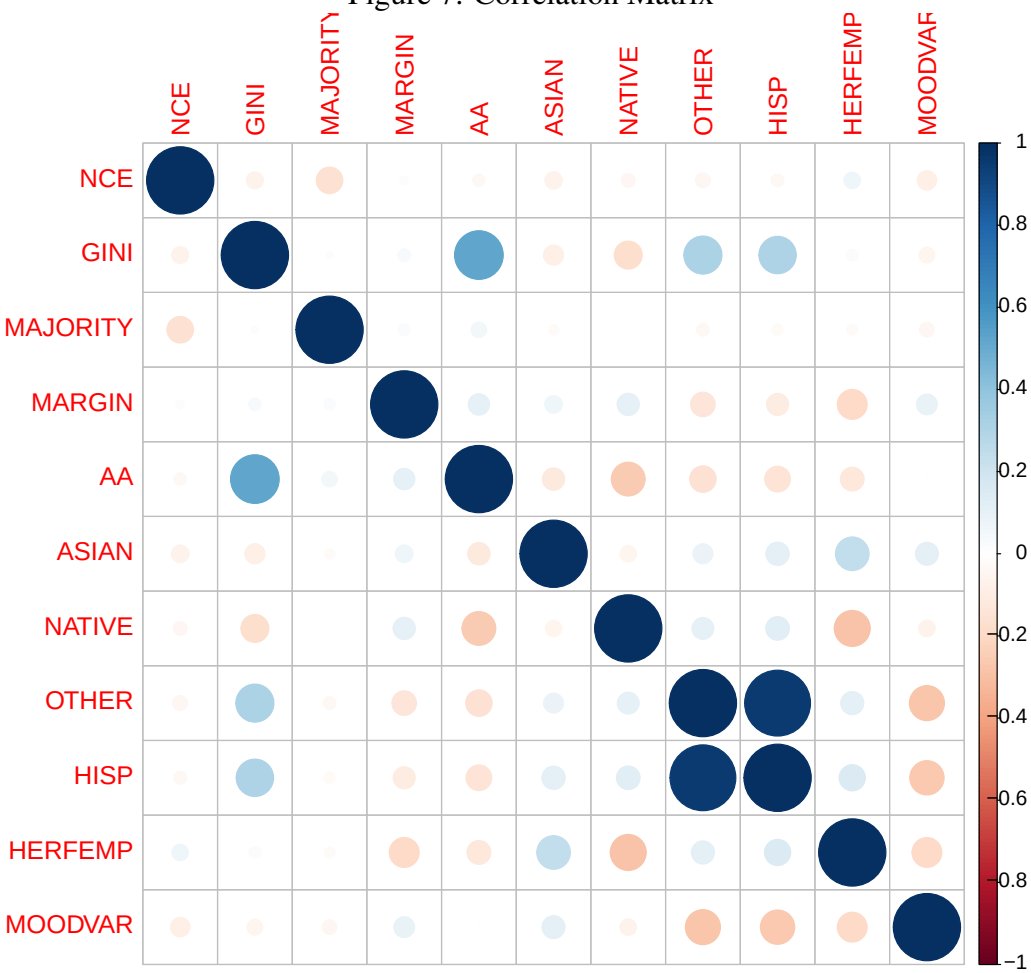
percentage measure, percent of classification errors (PCE). Because the beta regression results turn out similar to those in the Poisson regression, in terms of direction and significance, concerns over model fit and measurement error in the dependent variable can be relaxed.

Figure 7 is a basic bivariate correlation matrix among all variable pairs. Intensity of color corresponds to strength of correlation between the two variables represented in a cell. Blue indicates a positive correlation, red indicates a negative correlation, and white indicates zero correlation. The size of the circles also corresponds to the strength of the relationship. Notice in Figure 7 the percentage of African Americans in a state is highly positively correlated with income inequality, as we should expect. That is, a possible false negative is present here because multicollinearity augments standard errors. It is also the case that both percent African American and the South dummy are positively correlated with the key independent variable, income inequality. However, the Gini coefficient variable retains statistical significance in spite of these collinearity problems. This stands as further evidence of the impact of income inequality on legislative consistency. For reference, absent multicollinearity, Columns 3 and 4 of Table 7 provide the results of bivariate models.

Results

Column 1 in Table 7 displays the results for the full Poisson model and Column 2 displays the beta regression results. As expected, the Gini coefficient is a negative and statistically significant predictor of legislative inconsistency in both models. Put differently, as income inequality increases, the consistency of a district's representative also increases. Both findings support the primary hypothesis: income inequality in a district is negatively associated with the roll-call inconsistency of its legislative representative. Substantively, a standard deviation increase in the Gini coefficient corresponds with about a 3 percentage point decrease in the number of classification errors, or about 6 fewer errors. When moving from the minimum to the maximum value of income inequality the rate of incorrect classifications changes by a factor of -7.6 for majority party members and -8.8 for minority members. In other words, legislative consistency increases faster for majority party mem-

Figure 7: Correlation Matrix



bers, all else equal. As the percentage of a state's Hispanic increases, inconsistency also increases. Finally, as the ideological variance in a state increases legislative inconsistency decreases.

The alternative hypotheses have mixed results. *Hypothesis 2* is supported by the negative and statistically significant coefficient on majority party status. That is, being a member of the majority party decreases the number of errors made when predicting roll-calls. Curiously, the direction of the relationship in *Hypothesis 3* turns out in the significant and in the opposite direction in the Poisson model. As a legislator's margin of victory in the previous election increases, the number of prediction errors also increases. The effect of margin of victory variable is indistinguishable from zero in the beta regression. Also unexpectedly, *Hypothesis 4* is significant in the opposite direction for all racial categories in the Poisson regression and indistinguishable from zero in the beta regression. However, *Hypothesis 4* is in the predicted direction for Hispanic origin. As the percentage of a state's Hispanic population increases, both the number and percentage of errors increase. *Hypothesis 5* is partially supported by the results as the number of errors does increase with economic diversity, but the effect of economic diversity is indistinguishable from zero in the beta regression. The regression coefficients testing *Hypothesis 6* are statistically significant and in the opposite direction in both models. As the variance in a state's public mood increases, the number of prediction errors decrease.

Figure 8 contains predicted values plots for selected variables holding majority status constant at a value of 1 and all other variables at their mean values. For income inequality in plot (a), moving from the minimum observed value to the maximum observed value decreases the number of classification errors by 9, or about one-third of a standard deviation of classification errors. For economic diversity in plot (b), moving from the minimum observed value to the maximum increases the number of classification errors by 9, or about one-third of a standard deviation of classification errors. For margin of victory in plot (d), moving from the minimum observed value to the maximum value increases the number of classification errors by 9, or about one-third of a standard deviation of classification errors. Inequality has about the same magnitude effect on legislative consistency as economic diversity and margin of electoral victory. State ideological variance, on the other hand,

Table 7: Regression Models

	Dependent variable: Legislative Consistency			
	NCE	PCE	NCE	PCE
	Poisson	*Beta*	*Poisson*	*Beta*
	(1)	(2)	(3)	(4)
Gini Coefficient	-1.076^{***}	-2.652^{***}	-1.193^{***}	-2.627^{***}
	(0.280)	(0.999)	(0.207)	(0.757)
Majority	-0.146^{***}	-0.129^{***}		
	(0.010)	(0.036)		
Margin of Victory	0.114^{***}	0.084		
	(0.029)	(0.103)		
% African American	-0.128^{*}	-0.034		
	(0.071)	(0.252)		
% Asian	-0.606^{***}	-0.410		
	(0.081)	(0.272)		
% Native	-0.929^{***}	-1.084		
	(0.204)	(0.713)		
% Other	-2.575^{***}	-4.222^{**}		
	(0.500)	(1.783)		
% Hispanic	0.868^{***}	1.552^{**}		
	(0.213)	(0.759)		
Herfindahl Score	0.458^{***}	0.038		
	(0.116)	(0.413)		
Mood Variance	-0.002^{***}	-0.004^{***}		
	(0.0003)	(0.001)		
Constant	4.653^{***}	-0.568	4.735^{***}	-0.824^{**}
	(0.129)	(0.463)	(0.091)	(0.331)
Observations	600	600	600	600
R^2		0.071		0.020
Log Likelihood	$-5,323.107$	1,000.940	$-5,528.592$	984.863
Akaike Inf. Crit.	10,668.220	-1977.881	11,061.180	-1963.726
Note:				*p<0.1; **p<0.05; ***p<0.01

Figure 8: Selected Variable Plots

Predicted Errors Across Values of Selected Variables With 95% Confidence Intervals

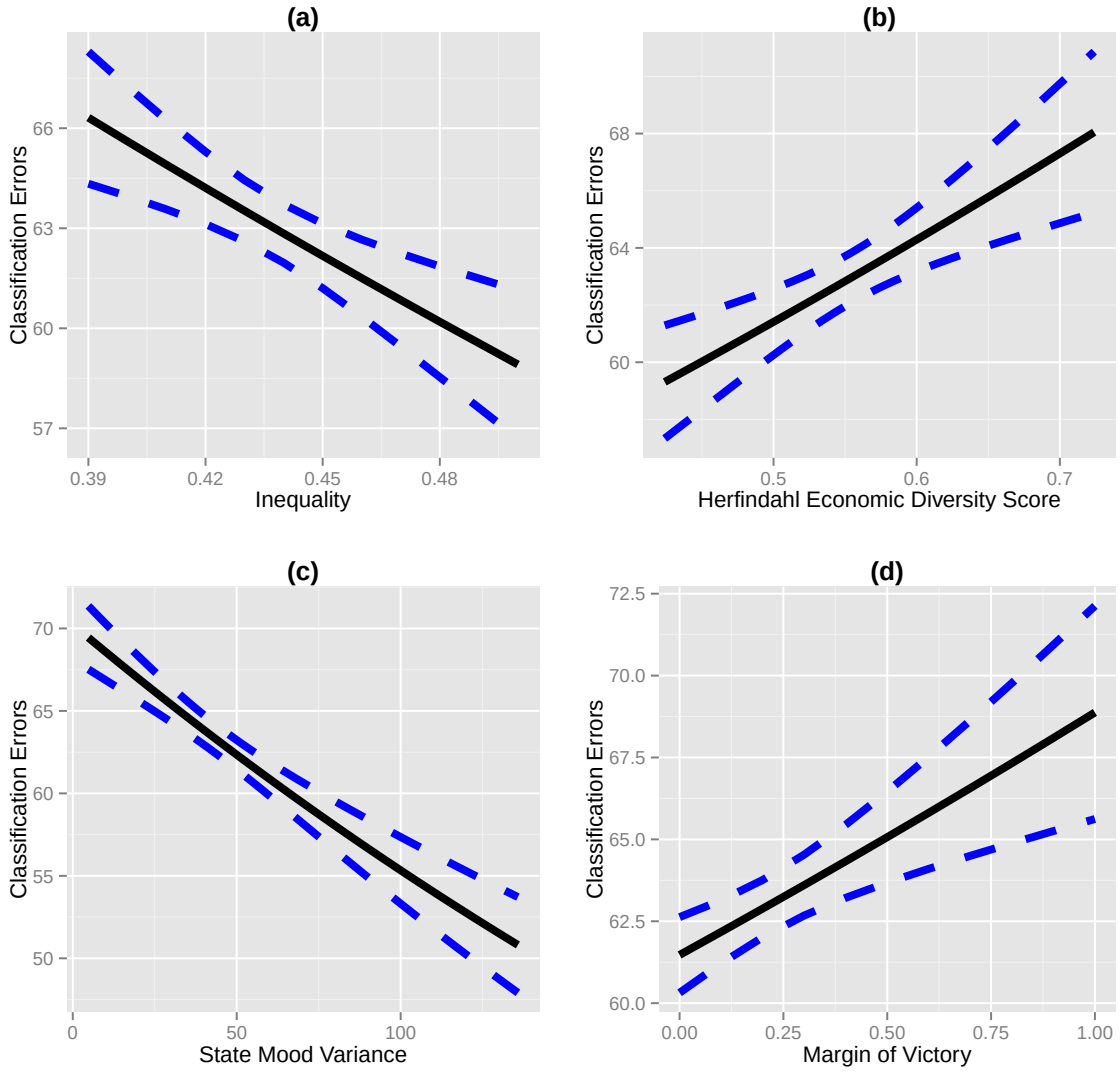
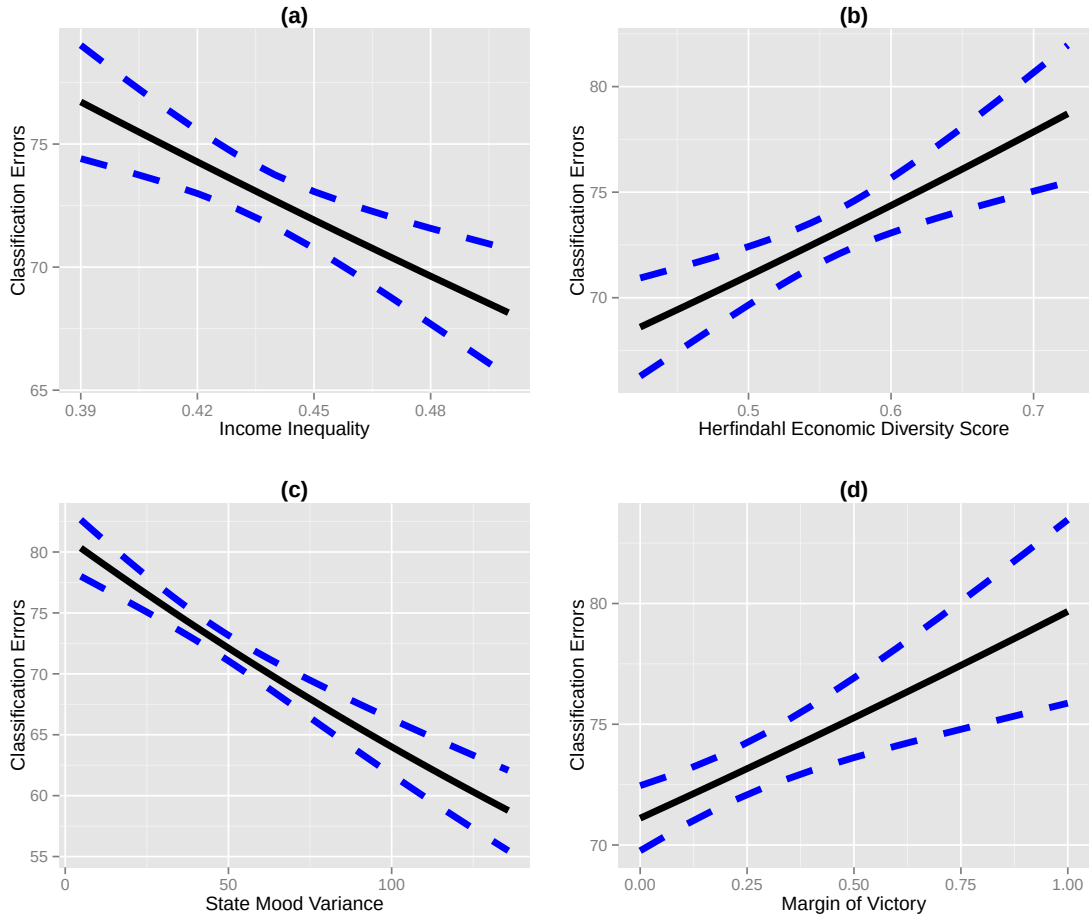


Figure 9: Selected Variable Plots

Predicted Errors Across Values of Selected Variables With 95% Confidence Intervals



has the largest effect on consistency. Moving from the minimum observed value to the maximum observed value decreases the number of classification errors by 18, or about two-thirds of a standard deviation of errors. The magnitude of income inequality's effect is about half the size of a state's ideological variance.

Figure 9 contains predicted values plots for selected variables holding majority status constant at a value of 0 and all other variables at their mean values. Predicted values results turnout similar for minority members, with a few caveats. For income inequality in plot (a), moving from the minimum observed value to the maximum observed value decreases the number of classification errors by 9, the same effect as majority members. For economic diversity in plot (b), moving from the minimum observed value to the maximum increases the number of classification errors by 10, one more than for majority members. For margin of victory in plot (d), moving from the mini-

mum observed value to the maximum value increases the number of classification errors by 9, the same amount as for majority members. As with majority members, inequality has about the same magnitude effect on legislative consistency as economic diversity and margin of electoral victory. State ideological variance again has the largest effect on consistency. Moving from the minimum observed value to the maximum observed value decreases the number of classification errors by 21, 3 additional errors over majority members. The magnitude of income inequality's effect remains about half the size of a state's ideological variance.

Discussion

Senator Bob Kerrey (Nebraska-D) was once reported as being "deft, energetic, and never predictable."[21] Indeed, Kerrey owns one of the largest levels of roll-call inconsistency (148 errors) in the 1990s Senate while hailing from Nebraska whose income inequality for that session of Congress was below average. The analysis above indicates the degree to which income inequality devalues the party label. I explain how a legislator's rationale when voting on roll-calls changes as a result of income inequality in their districts and this leads them to vote with differing degrees of consistency. Because legislators seek to satisfy those constituents holding the most reelection clout and because those individuals tend to be wealthy, income inequality leads to predictable legislators. I find empirical support for this relationship in the U.S. Senate. These findings speak to the nature of representation in the context of growing income inequality. Consistent legislators have the ability to behave in a manner that satisfies those who control their political futures and ignore those without such power. As it appears, this is precisely what they do. When the share of income, and with it political clout, becomes concentrated among fewer individuals, legislators have less incentive to represent their districts at-large and more incentive to represent only those individuals who control the bulk of political resources.

The impact of income inequality on democratic representation has been demonstrated by many

[21] See the following article: The Christian Science Monitor, October 2, 1991, Vol. 83(216), p. 8.

scholars.[22] Not only does inequality cause U.S. legislators to respond more to rich constituents than to poor constituents, but it also produces legislators whose behavior is more predictable. Here, I have shown that legislators representing districts experiencing high degrees of income inequality are sufficiently confident in how they should behave vis-vis party pressure that they produce a consistent and predictable voting record on the chamber floor. It is important to consider, however, that roll-call votes are one of many ways in which legislators represent their constituents. Fenno describes a legislator's perspective on representation as "...nearly everything he does to win and hold support - allocating, reaching, presenting, responding, communicating, explaining, assuring - involves representation. It is a view of representation as a process. It is a view of representation as politics, with all of the uncertainties of politics" (Fenno 1978, 260). The present roll-call analysis is but one facet of a legislator's representational efforts. Nonetheless, roll-call consistency indicates the level of certainty a legislator possesses about how her behavior will play in her home district as well as in the next election. In representing their constituencies and pursuing reelection, legislators desire certitude. Because citizens with high incomes participate in the political process disproportionately more than others, they provide legislators with greater certainty. Moreover, when there are fewer high income constituents, as is the case in unequal districts, legislators are more confident in what it is that advocates desire and they vote more consistently on roll-calls as a result. In evaluating an incumbent, consistency is a desirable characteristic. The research presented here demonstrates a surprising outcome in contemporary American politics. That is, income inequality leads to a desirable attribute among elected representatives, consistency. In an era of highly unsatisfied citizenry (sub-10% approval ratings for Congress), a next set of questions includes whether citizens desire a new crop of legislators from which to choose and whether high income citizens are willing to assist in this effort.

[22] See Smeeding (2005); Gilens (2012); Hayes (2013); Rigby and Wright (2013) among others.

Chapter 3 - Do Legislators Know What They're Doing? A Survey and Measurement Tool of Legislative Knowledge

"You are remembered for the rules you break." -General Douglas MacArthur[23]

A freshman state legislator once stood in objection at the passage of the first bill he authored. Addled by the peculiar objection, the presiding officer inquired as to the nature of the freshman's grievance. In a foolhardy response, the legislator expressed concern over the legislation being sent to the upper chamber, where it would surely die, rather than to the friendly confines of the governor's desk where he thought it belonged.[24] Clearly, the freshman legislator was less than familiar with the legislative process that requires bills be passed in both chambers of the legislature before being sent to the executive for approval. At least some legislators know surprisingly little about the legislative process in their own chambers.

A recent example from the U.S. Senate underscores the undesirable consequences that can occur when legislators are unfamiliar with the rules of their chamber. At the end of the 113th Congress, Senate Majority Leader Harry Reid and Minority Leader Mitch McConnell consented to a calendar schedule that would finish off the congressional session with a budget vote and perhaps check off a confirmation vote or two on a long list of President Obama's executive nominees. Because the agreement between the party leaders required unanimous consent, any senator could refuse and keep the Senate from adjourning sine die. Senators Lee and Cruz decided to shirk their party duties and force a vote of their own, a constitutionality vote on the Obama Administration's recent executive order and other unilateral action on immigration. However, by forcing this vote, the deal between Reid and McConnell had been dissolved and the Senate calendar reopened allowing Harry Reid and the Democrats to confirm more nominees than expected. In a show of discountenance, not policy disagreement, many Republicans voted in opposition to Lee and Cruz

[23]Robert I. Fitzhenry, The Harper Book of Quotations 448, page 245 (3rd ed. 1993).

[24]I would like to thank Keith Hamm for sharing this anecdote he once observed while visiting U.S. statehouses.

on their immigration vote. The ill-advised move by Lee and Cruz provided Democrats an unearned victory at the end of their majority tenure thereby drawing the ire of their Republican colleagues.

Scholars often observe legislators making less than shrewd legislative maneuvers, but we know little about the nature and extent of this dearth of legislative acumen. Furthermore, a simple measurement tool for assessing legislative knowledge complements recent advances in measuring legislative behavior such as Volden and Wiseman (2014)'s legislative effectiveness scores. The present study develops such a tool by analyzing original survey data from state legislators across the U.S. states. Results suggest, among other things, avoiding obscure content and formatting questions with simple yes/no response categories is beneficial toward valid legislative knowledge measurements.

Individual and Institutional Characteristics That Incentivize and Dis-incentivize the Development of Legislative Expertise

Legislators and their staffs work together to conduct the business of legislating. Because staffs are centrally important actors to what we observe as legislative behavior, it is often more accurate to think of legislative behavior as a manifestation of all actors within a legislator's office. In most state legislatures, elected members have support staff that assist in decision making. That is to say legislative offices are a unit and legislators are only as good as their staffs. Legislators rely on chiefs of staff and other assistants to inform and otherwise discuss political strategy with them. Thus, any notion of a legislator's prowess must consider staff as a crucial ingredient. The result is a conception of legislative offices rather than individual legislators. When referring to specifically to "legislators" below, I intend to also relate the statement to the legislative office that represents a given district. In some cases this means only the legislator because some states provide no personal staff.[25] In other states this means the office that includes chiefs of staff, schedulers, and other legislative researchers. Regardless of the makeup of the office, the incentives and dis-

[25]The results below are no different when conducted using only those states without staff.

incentives proposed here remain. That is, I assume legislators' offices are extensions of themselves.

The motivation to ascertain specific knowledge about the legislative process is derived from legislators' core goals: reelection, influence in the chamber, and making good policy (Fenno, 1973; Kingdon, 1977). In order to win reelection, legislators must 1) satisfy the constituency who will vote in the next election, 2) satisfy (or not irritate) party officials who control chamber functions key to impacting policy, nomination prospects, and reelection resources, and 3) making good policy involves making sure that policy proposals the legislator believes will benefit her constituents make it through the legislative process. In order to do these three things, legislators use and exchange procedural and issue-based knowledge such that collaboration and compromise facilitate the passage or blockage of policies that support their core goals. To the extent that individual legislators have unique sets of goals, each will need some level of procedural astuteness in order to pursue their specific goals without relying on someone else. Proposing amendments, navigating pieces of legislation through the chamber, and blocking similar efforts by opponents all require detailed awareness of chamber procedures. This legislative knowledge is undoubtedly a boon to any legislator's policy making toolbox and legislators do well to seek it out. The motivation for this research is to discern the extent to which legislators obtain this knowledge and ascertain the motivations underlying their efforts to do so.

Who Might Be Motivated To Learn the Legislative Process?

It is one thing to sit through an orientation and be introduced to basic norms and expectations of a legislative chamber. It is quite a different thing to internalize the organizational structure and procedural rules of the chamber such that one can use it to one's own advantage. If legislators are to be effective at pursuing their own interests within their respective chambers, then they do well to understand its codified rules and procedures as well as how power and workload are distributed. Indeed, legislators have an interest in facilitating, amending, and obstructing legislation during the policymaking process. This is how they make an impact on policy. For example, when it is in their own interest to pass a given policy, members might use a discharge petition, or simply the threat of one, to prevent a committee from killing the bill. Conversely, when it is in their interest to block

a bill, some chambers allow individual members the ability to filibuster. Learning the legislative process can help legislators pursue their political interests and it is worth the investment if only to avoid embarrassment and loss of institutional political capital (demonstrated in the anecdotes above). The amount of knowledge legislators will seek about the legislative process likely depends on the incentives available to them to obtain this knowledge.

The legislative process, as I consider it here, involves a set of procedural rules that govern how bills are handled and a hierarchy that controls the organization of power. Further, *legislative knowledge* implies the the various rules, procedures, and distribution of specific powers associated with lawmaking in the legislative context. Legislators are interested in promoting their policy agenda and must do so within the confines of this institutional structure. They draft, sponsor, cosponsor, and markup legislation in ways that serve their own interests either directly or indirectly by assisting fellow legislators in their similar endeavors. More specifically, legislators' interests consist of securing pork for their home districts, promoting their party's platform, and otherwise representing the constituents who will elect them in the future. Toward this end, legislators are incentivized to impact the policymaking process in many ways. One important way that they can individually impact the success or failure of a given measure is by understanding how to bills flow through their chamber and who controls the various veto points.

Legislators sponsor, co-sponsor, and cast roll-call and committee votes on various measures in their chamber, but they also develop specializations by focusing on specific language of their committees' bills. Yet, legislators also have unique sets of goals that compel them to learn the institutional bylaws of their chamber. Some of these goals are derived from the legislator's institutional setting, while others are derived from individual characteristics. Among the institutional features incentivizing members to obtain legislative knowledge are professionalism, length of chamber service, and being in the chamber leadership. Professionalized legislatures provide members with resources to gain and and use legislative knowledge effectively. More tenured legislators have had more experiences, and thus more opportunities to discern the procedural and organizational parameters in their chamber. Chamber leaders need legislative knowledge in order to understand how

best to utilize their positions of power.

On the other hand, progressive ambition and the existence of term limits are disincentives for legislators to gain legislative knowledge. Forward looking progressively ambitious legislators have a disincentive to learn the procedures since they know they will be running for another office beyond their legislature in the near future. Legislators elected to term limited chambers have little incentive to obtain legislative knowledge because they know that their time there will be short-lived. In the section below, I outline these incentives and dis-incentives in detail providing theoretical expectations for variations in legislative knowledge among state legislators.

Gender, Race, Ethnicity, and the Double Disadvantage

Women will differ from male legislators in the amount of procedural knowledge they obtain because they are motivated by issues that require special abetment in order to be successful in the policymaking process. First, women legislators hold a perception that they must pay close attention to women's issues (Barrett, 1997) and they often do so in practice (Saint-Germain, 1989). Additionally, women tend to be more effective legislators (Volden and Wiseman, 2014), particularly due to the selection effect of having more high qualified women opt into the candidacy at the outset (Anzia and Berry, 2011). Extending this logic, if women are to be successful in their efforts, then they should also be familiar with the legislative process through which they must pass policy. By better understanding legislative procedure, women attempt to overcome political disadvantages such as marginalization (Williams, 1998; Hawkesworth, 2003) and similar inequalities existing in legislatures under a "critical mass" of female membership (Bratton, 2005). Issues especially important to women, such as those affecting women's health, are often extremely controversial. Controversy brings about strong opposition, and thus bills relating to these issues are often more difficult to navigate through the legislative process. In order to represent advocates of women's issues in pursuit of winning elections, ensure that policies relating to women's issues are sound, and to do so with influence in their chambers, women must be savvy to the legislative process in their chambers. As a result of being focused on issues with more resistance and being politically disadvantaged, female legislators will exhibit more procedural knowledge, on average, than male

legislators.

Conversely, women focus on particularized policy issues and this may indicate that female legislators rely more heavily on other women for procedural expertise. Their propensity to focus on issues that concern women leads to coalition building in the chamber among women (i.e. women's caucuses). Within these coalitions, expertise sharing occurs such that a select few women provide parliamentary expertise while others focus on specific issues. Some research suggests that male legislators rely on parliamentary expertise more than women to achieve policy success (Ellickson and Whistler, 2000). Additionally, Swers (2005) suggests that women legislators have constituents with higher expectations of policy expertise than for men. To the extent that the organization of legislative information is as Krehbiel (1991) describes and constituents anticipate policy expertise, legislators specialize, and they exchange their expertise with other issue specialists, women will not differ in their procedural knowledge from men on average.

Racial and ethnic minority legislators, like women, have more cause to learn procedural rules than their white counterparts. Minorities also believe that they must pay especially close attention to minority issues (Barrett, 1997). Minorities have limited influence in legislatures because they are relatively small in number (Guinier, 1995; Phillips, 1995). This limits the size of any permanent coalition (such as caucuses) they might form among themselves and requires that each individual legislator be more reliant on his or her own resources. Minorities are also marginalized, within similar traditions as women, in the legislative process (Williams, 1998; Hawkesworth, 2003). There is evidence that minority legislators exert more effort at the committee stage pursuing all types of bills (Gamble, 2007). They will be compelled to learn procedures more than their white counterparts as a result of their need to overcome these disadvantages in order to navigate particularized, often contentious, policy proposals through the legislative process. Therefore, minority legislators will have, on average, higher procedural knowledge than their white counterparts. Additionally, minority legislators, suffering a disadvantage in terms of numbers, will be more astute to the procedures concerning minority rights.

The double disadvantage is the notion that African-American women experience political hindrances as a function of being a racial minority and, independently, as a function of being female. Moncrief, Thompson and Schuhmann (1991) note this problem in electoral politics. Because there is evidence that supports the idea that minority women legislators do perceive their own issues has having a more difficult path to becoming policy (Hedge, Button and Spear, 1996), it is reasonable to assume that this dual impediment is carried over to the legislative setting. Therefore, legislators who are both minority and female will exhibit more procedural knowledge than white males (Hypothesis 4). It is important to note that the research on this topic largely focuses on African-American women specifically.

Organizational Incentives to Learn the Legislative Process

Legislators specialize in a particular policy area and rely on the talents of their colleagues and interest group lobbyists for information in other areas. This specialization among legislators helps them organize the workload, and the process of organization itself has an impact on the incentives presented to any individual legislator to obtain legislative knowledge. For instance, legislators specializing in procedural knowledge may trade it with other legislators for policy knowledge. This informational organization perspective suggests that legislators have backgrounds in specific areas of policy and they exchange this esoteric information with others holding other types of expertise (Krehbiel, 1991). Recent work reveals that issue specialization has been a feature of legislatures across the U.S. states for a considerable period of history (Hamm, Hedlund and Post, 2011). This suggests that legislators not sitting on rules committees will report more reliance on others for this knowledge. Additionally, if legislators rely on specialists, then rules committee members will have the greatest levels of legislative knowledge due to their jurisdictional expertise.

Information is a key component in nearly all formal models of the legislative process. Krehbiel (1988) explains how structure-induced equilibrium produces stability as a result of institutional features of legislatures and game theory suggests that unequal access to information about procedures also affect legislative behaviors that we observe. Shepsle and Weingast (1994) argue from

a supply and demand perspective suggesting that legislators specialize according to district needs, they are assigned to committees according to these demands, and that the supply of information and powerful positions are controlled by majority parties. As a function of the district needs basis for specialization, I assume the need for legislative knowledge is equal across legislative districts. Furthermore, these models suggest that information and access to it are key components of legislative organization. Thus, it will be the case that knowledge of the legislative process will be confounded by the amount of reliance a member places on her peers for this information.

Professionalism and Legislative Knowledge

Professionalized legislatures provide more resources allowing legislators to pursue their policy ends throughout the legislative process than less professionalized legislatures. Professionalization has several components that define it. Squire (2007) argues that "salary and benefits," "time demands of service," and "staff and resources" are the broad categories under which these components all fit. Salary and benefits are motivations for directing a greater portion of a legislator's attention toward chamber business than to outside business, such as their personal careers, and it attracts more adept members. Time demands of service, when they are large, cause members to become more experienced as a result of going through the legislative process with greater frequency and over longer periods of time. Having substantial staff and other resources, member offices mobilize to impact legislation in a greater variety of ways, including through the use of legislative knowledge. Implicit in each of the observations Squire makes is the notion that more professionalization leads to more involvement in the legislative process. This suggests that when legislatures are highly professionalized they will have greater knowledge of their chamber's rules and procedures than legislators who work in less professionalized legislatures.

Because professionalism is a multidimensional concept, it is also useful to examine the effects of the specific components of professionalism on legislative knowledge. Bowen and Greene (2014) show important variation in professionalism across the states that is not captured by professionalism indexes. Staff, expenditures per legislator, salary, and session length vary differently by state.

As mentioned above, staff are incredibly important actors in the office of a legislator. They hold high degrees of expertise in a variety of areas, including legislative knowledge as I have defined it here (Romzek and Utter, 1997). Expenditures per legislator can also be taken as a measure of the ability of a legislative office to harness legislative knowledge. Likewise, greater salaries for legislators enable them to focus full-time on their job as a legislator and longer sessions require full-time attention. As staff, resources, and salaries are enhanced, legislators will have greater capacity to obtain legislative knowledge. Legislatures meeting for a greater length of time will generate a necessarily more full-time attention from its members.

Tenure, Term Limits, and Legislative Knowledge

Tenure in a particular chamber will be an important indicator of procedural knowledge as a result of the member having played the game iteratively. As they spend more time in the chamber and accumulate more legislative experience, their desire to be influential, be reelected to the chamber, and to make good policy will drive their desire to obtain procedural knowledge. Much like the first time a person plays poker, legislators must play a few rounds before they are able to internalize the details of the process that occurs in each round and the different options that become available to them. The longer they play, the better they memorize the process and the more likely they are to have learned of the existence of procedures that are not used frequently. Thus, on average, more senior legislators will have greater knowledge than less senior legislators.

Kousser (2005) explains how term limits and low professionalism contribute to weak leadership, constantly evolving committees, and less productive membership. Specifically, he computes "batting averages" for individual legislators (their proportion of successfully to unsuccessfully authored bills). Here he finds that higher batting averages appear in states without term limits. This is likely a product of legislators having fewer incentives to engage the legislative process in a way that they will familiarize them with the rules and organization of the chamber. In other words, when legislators can foresee that only a few rounds of legislating will occur, they will be more likely to neglect the internalization of legislative knowledge. One implication of this argument is

that legislators in chambers with term limits will have less procedural knowledge than legislators in chambers without term limits.

Schlesinger (1966) provides three types of ambition politicians possess: discrete, static, and progressive. Few politicians are discretely ambitious, seeking election for only one term. Statically ambitious politicians seek a stable form of power within their current institution. An example of this might be the speaker of a statehouse who wishes to remain speaker for the duration of her career. Progressively ambitious legislators seek to use their current position as a springboard toward higher office. State legislators seeking to run for Congress, for example. In terms of procedural knowledge, statically ambitious legislators should invest greater effort toward learning procedures because they will use these legislative tools for the duration of their career. Because legislative procedures differ from one chamber to the next, progressively ambitious legislators have less incentive to internalize the rules of their chamber. Instead, they rely on party leaders, clerks, and other experts to navigate the legislative process.

Progressive ambition provides a disincentive to learn the procedural rules of one's chamber. Instead, legislators are agents who look to their principals for guidance on the pursuit of political ends that will satisfy these principals. These stakeholders in the career of a state legislator are primarily party officials, but also major donors, who have an impact on electoral resources necessary for obtaining future offices. Over half of the newly elected members to the 113th Congress served in their state legislatures previously. Many of the donors in state legislative races are the same donors that contribute to campaigns for the U.S. House and Senate.[26]. Moreover, "informal party organizations (IPOs)" are responsible for supplying key electoral resources to legislators who run for higher office (Masket, 2011). Although they may not provide the basis for forming legislative coalitions, financiers and endorsers in state legislative elections play an essential role in the success of those candidates (Grossmann and Dominguez, 2009). Because legislators rely heavily on these

[26]See http://www.npr.org/blogs/itsallpolitics/2014/11/18/365015932/big-money-is-helping-gop-win-in-state-legislatures-too

political networks in elections and on party leaders in legislating, they will have ample incentive to follow-the-leader rather than pursue legislative success via their own knowledge about how to impact policymaking in their chamber. In other words, they have little incentive to learn procedural maneuvers if they are just going to follow instruction from their leaders. As a result of this reliance on actors with a stake in their future political careers, we should observe less knowledge among legislators who seek higher office, than on statically ambitious legislators.[27]

Rules and Organizational Knowledge: A Survey of State Legislators

The legislative process, as I consider it here, involves a set of procedural rules that govern how bills are handled and a hierarchy that controls the organization of power. Further, *legislative knowledge* implies the the various rules, procedures, and distribution of specific powers associated with law-making in the legislative context. Legislators are interested in promoting their policy agenda and must do so within the confines of this institutional structure. They draft, sponsor, cosponsor, and markup legislation in ways that serve their own interests either directly or indirectly by assisting fellow legislators in their similar endeavors. More specifically, legislators' interests consist of securing pork for their home districts, promoting their party's platform, and otherwise representing the constituents who will elect them in the future. Toward this end, legislators are incentivized to impact the policymaking process in many ways. One important way that they can individually impact the success or failure of a given measure is by understanding how to bills flow through their chamber and who controls the various veto points.

Legislative knowledge refers to legislators' understanding of the rules, procedures, and organization regarding the legislative process as well as the ability to find this information when needed.

[27]This also suggests that chamber leaders and committee chairs must understand the legislative process in order to be effective leaders. They also develop a level of shrewdness with regard to how bills are processed as they work in a leadership role. As hypothesized above, legislators who occupy these positions will demonstrate greater knowledge of the legislative process than rank-in-file legislators.

Sometimes legislators utilize their staff (Romzek and Utter, 1997), and other members (Fenno, 1973; Krehbiel, 2004) including the chamber parliamentarians for information about the legislative process. In order to be influential and make policy legislators need to understand how to maneuver their own bills (authored, sponsored, cosponsored, and others that directly benefit their constituents) through the chamber. The administration and question format development in this survey aim to assess how legislators obtain and utilize this knowledge in their "natural environments." The survey was administered in three waves. The first was sent to 7338 legislators' email addresses in all 50 states. The remaining waves were sent to all legislators who did not respond to previous solicitations. Emails addresses were gathered via chamber or personal websites.[28] 186 state legislators completed the knowledge portion of the survey. I outline the question wording and survey format below.

Survey Design

In constructing this questionnaire, I follow existing suggestions from measuring knowledge in survey methodology literature. Questions are worded and ordered according to the suggestions proposed by research in the public opinion domain. Much of the research on elite survey methodology has to do with mode effects of the interview process (Aberbach and Rockman, 2002; Berry, 2014; Goldstein, 2002; Richards, 2007). Because I am interested in the prevalence of legislative knowledge across the U.S. states and online survey is the most efficient way to reach legislators, I avoid the problems associated with face-to-face elite interviewing. The most prominent problem with the face-to-face mode is the amount of time it takes to administer. Since elite surveys are typically done during office hours (i.e. while the respondent is at work), respondents value the time devoted to the survey more than the average respondent. For this reason I structure the survey so as to minimize time constraints. Most respondents were able to complete the survey in ten minutes

[28] South Dakota specifically does not provide public access to legislators' email addresses. In this case I constructed email addresses based on several local citizen groups who published online examples of naming conventions used for the state's legislators. I simply used each name to replicate these addresses. All of the emails for South Dakota were successfully sent without return and four legislators from this state returned completed questionnaires.

or less. This amount of time provides respondents with enough time to think carefully, but not so much time that they are able to research the correct answers. With a limited time to answer the questions, respondents must rely heavily on their memories and the office staff immediately available to them, just as they would if they were working in their legislative capacity. Some scholars point out that reporting a memory is more difficult to do from recall than from recognition, particularly in terms of political knowledge. For instance, respondents found it difficult to recall the name of their congressperson when asked to do so from memory on open-ended questions (Miller and Stokes, 1963); only about half correctly identified the name. When asked to identify them from a list, nearly all respondents correctly identified their congressperson's name (Tedin and Murray, 1979). Indeed, close-ended questions are more accurate than open-ended questions for measuring factual knowledge (Mondak, 2001). I constructed a battery of questions asking about the existence or non-existence of particular rules regarding both floor and committee level procedures and organization in the subject's chamber. The most effective questions are multiple choice yes/no format and come with brief descriptions of the main procedure referenced in the question. The survey was presented in the cover letter as an effort "...to collect data regarding legislators and their usage of different institutional features in their chambers."

Among the tasks fundamental in the design of any questionnaire is to put careful thought into the ways in which questions are worded, formatted, and the order in which they appear. For instance, information is reported differently when magnitudes are assigned to the subjects of questions (Schuman, 2011). Because the focus here is on knowledge of the existence or absence of particular rules, rather than more complex measurements such as perceptions or self-description, I avoid the practice of using descriptive language in reference to the subject of questions. This also eliminates equivocation in the purpose of the question. Responses can be structured in a way that invites biases such as recency and primacy and therefore I randomize the order of the responses for each item. Finally, question order can affect the responses that are given. I assume that state legislators have few literacy and other related comprehension problems relative to the general population. Despite this, I make efforts to reduce the amount navigational errors by adopting suggestions by Groves, Fowler, Couper, Lepkowski, Singer and Tourangeau (2009), such as branching questions

where applicable.

The battery of 19 yes or no legislative knowledge questions was imbedded in the middle of a larger 50 item survey. This is done for three reasons. First, it makes the battery seem less like a test and more like part of a general questionnaire about the chamber and thus minimizes the potential for a Hawthorne Effect[29] in the responses. Second, it is beneficial to have the respondent cognitively focused on legislative activities, as they would be during pre-floor planning or in the "thinking on their feet" scenario on the floor. Because some legislatures were not in session, priming them with various questions about the legislature is beneficial for purposes of validity and reliability. Third, fatigue and impatience may cause respondent satisficing (Groves et al., 2009), especially in a busy office environment. Survey fatigue invites lazy responses as a respondent moves toward the end of a questionnaire and this can cause problems with measurement validity. This is avoided in the present survey by placing simple demographic questions at the end (Schuman and Presser, 1996), the battery in the middle, and a few warm-up questions at the beginning.

Measurement biases also arise when "don't know" (DK) responses are encouraged (Mondak, 2001). That is, many surveys have placed phrases in the stem of questions, provide the DK option, and include short-answer formats that encourage respondents to choose DKs. I avoid these practices, but that does not guarantee a valid and reliable response, even if it does help alleviate those concerns. The respondent may choose not to answer the question at all. I assume these non-responses are equivalent to DKs.[30] Because the primary interest in this study is knowledge, DKs count against a positive measurement of the concept. In other words, if the respondent knew the answer with any certainty, she would report it. As such, I coded all blank responses to the

[29]The Hawthorne Effect is the notion that respondents alter their behavior in ways they otherwise would not as a result of being consciously observed.

[30]All respondents in the survey who did not answer one of the 19 knowledge questions did so seemingly randomly and successfully answered the surrounding questions. That is, no pattern emerged that would lead to concerns over systematic comprehension problems.

knowledge battery in otherwise completed surveys as incorrect toward their final knowledge score.

Fisher and Herrick (2013) discuss the efficacy of mail versus internet surveys of state legislators, noting that telephone reminders increase response rates and mail-in surveys have higher response rates. However, they find that mail-in surveys are no different in terms of representativeness of the respondents. If non-response is uncorrelated with key variables of interest, then it should not produce any problematic bias in the results of the model, regardless of the response rate (Curtin, Presser and Singer, 2005; Groves, 2006). There is little reason to believe that non-response of state legislators is highly correlated with the key concept in this paper, legislative knowledge. Table 8 displays demographic and institutional descriptive statistics for the sample used in the analyses below. Additionally, there is a validity concern that legislators' staffs may be filling out the surveys rather than the legislators themselves. However, as I argue above, this is more a concern over how we define legislative behavior, than trepidation over validity. I take a legislator's behavior to be a manifestation of the efforts of her office. To test for this potential limitation, I do estimate scores for respondents in chambers who do not provide staffing resources for individual members and compare them to those chambers that do utilize staff. The results are indistinguishable from the full sample.

Measuring Legislative Knowledge

I develop a measurement that taps a legislator's knowledge of the legislative process in his or her own chamber. To achieve this I estimate legislative knowledge scores from state legislators' responses to an original survey. First, knowledge questions are "graded" as correct or incorrect by comparing the response to a data set of chamber rules and characteristics.[31] The result of the full battery of 19 questions is an average of 13.3 correct responses out of 19 total questions and a median of 13 with a standard deviation of 2.53. Computed in percentages, the figures are an average of 70% correct responses, median of 69.2% correct, and a standard deviation of 12.7%. The worst

[31]These data were gathered primarily from the Book of the States 2015 and supplemented with National Conference of State Legislatures (NCSL) data where necessary.

Table 8: Summary Statistics

Statistic	N	Mean	St. Dev.	Min	Max
Percent Correct 10-Item Battery	186	0.69	0.18	0.20	1.00
Percent Correct All Questions	186	0.71	0.14	0.32	1.00
Professionalism	186	0.15	0.11	0.03	0.48
Age	186	57.44	12.04	26	88
Tenure in Terms	186	3.43	3.48	1	23
African American	5	-	-	0	1
White	169	-	-	0	1
Hispanic	6	-	-	0	1
Asian	1	-	-	0	1
Native	3	-	-	0	1
Other	2	-	-	0	1
Female	42	-	-	0	1
Republican	107	-	-	0	1
Run for Future Office	112	-	-	0	1
Committee Chair	33	-	-	0	1
Rules Committee	19	-	-	0	1
Rules Committee	3	-	-	0	1
Term Limits	50	-	-	0	1

score is a 6 (31.6%) and the best is 19 correct answers (100%). Second, I conduct an exploratory factor analysis on the items in the knowledge battery in order to identify a common factor among as many questions as possible. By reducing the data to a set of questions sharing common variances, I am able to identify a single distinguishable dimension underlying the data. This dimension is legislative knowledge. The other eight questions load onto dimensions distinct from the single dimension of the eleven retained questions. Ultimately, this provides insight into the content and question wordings most conducive to measuring legislative knowledge.

The 10 questions measuring legislative knowledge as a single distinct dimension involve rules governing cosponsorship, bill introduction, floor amendments, germaneness, reference manuals, committee reporting rights, and committee proportionality requirements. The average number of correct responses on these questions is 6.9 (69%) with a median of 7. The worst score is a 3 (30%) and the best is a perfect 10 (100%). Compared with the full battery, these figures suggest a similar level of legislative knowledge. As we will see below, more confidence can be placed into these estimates since the battery of questions load onto a single clearly identifiable latent dimension.

Factor analysis performs two useful functions toward identifying measurement patterns in survey data. By modeling the covariance structure of the battery responses, it (1) reveals whether or not the set of survey items has measured a single latent concept and (2) identifies the degree to which each specific item contributes to this dimension. Because I am essentially grading a test of legislators' knowledge, my purpose is to discern a single dimension common to all of the survey items that can be interpreted as representing legislative knowledge. To the extent that multiple dimensions are required to account for the shared correlation variance among all of the survey items, I must eliminate those questions not contributing to the first common dimension.

The methodological discussion of how to determine the number of factors to retain in multidimensional data has been a long, and often contentious, battle. Lance, Butts and Michels (2006) usefully synthesize this lengthy debate. They determine that the eigenvalue-greater-than-1 rule commonly attributed to Kaiser (1960) in fact originated with Guttman (1954). Since then, assessments of the eigenvalue-greater-than-1 rule have demonstrated that it is a conservative estimate of the appropriate number of dimensions that can reproduce the data and alternative approaches have been developed (Lance, Butts and Michels, 2006). In the analyses below, I present a set of factor analytic procedures rooted in this research.

To develop a measure of legislative knowledge I estimate a non-iterated principal factors model of legislator scores from the battery of knowledge questions on the topics mentioned above. My goal in the use of this specific type of factor analysis is to discern whether or not a single underlying concept is being measured by the knowledge battery and the extent to which each battery item contributes to the measurement of that latent variable. To achieve this goal, a statistical procedure first identifies a set of correlation patterns among the items in the battery. These patterns represent the number of distinguishable constructs the battery items have in common. Another way to state this calculation is the portion of the variance any one battery item shares with the other items. This variance proportion represents a latent factor held in common by all of the battery items. With

larger sample sizes, an iterated principal factors model is an improvement over the non-iterated model. However, due to a relative small sample size, I opt for the non-iterated approach.

There are several requisite steps necessary to implement the non-iterated principal factors model. To start, an unrotated principle factors model is estimated. Then an oblique rotation of the factors is calculated. This approach provides two key types of information. As noted above, if the questions have done their jobs well enough, then there will be only one factor with a large loading relative to the other factor loadings. One can evaluate this visually from the table of factor loadings by assessing the number of eigenvalues greater than 1. The model also generates estimates of the impact of individual questions on the factors identified by the model. As evidenced in Figure 10 below, the first two factors are greater than 1, indicating that two important dimensions underlie the data. After an oblique rotation, Table 9 reveals two dimensions remain prominent. The item factor loadings in Table 10 indicate that there are a few problematic questions in the survey that provide little assistance in deciphering a prominent first dimension and in doing so obfuscate the underlying structure of the data. In other words, those items with near zero first factor loadings do not measure the same underlying concept as those with high factor loadings (positive or negative). I identify those items below, remove them and re-estimate the models, and then I discuss reasons why they fail to measure legislative knowledge. I end with a discussion of best practices for future endeavors into measuring legislative knowledge.

Results

Factor analyses may be rotated to aide in interpretation. Unrotated factor analyses uncover broad patterns of affinity suggesting the existence of one or more dimensions. Rotated factor analyses uncover specific and independent groupings of affinities known as clusters. In Figure 10, eigenvalues from an unrotated principal factors model are plotted for the entire set of 19 knowledge questions and reveal more than one important dimension in the data. Eigenvalues represent the relative importance of each factor to the overall structure of the data by measuring the amount of variance accounted for by each factor. Factor 1 and Factor 2 both have eigenvalues above 1, which breaches the eigenvalue-greater-than-1 criterion because the present analysis seeks only one dimension. The

first factor only accounts for about 46% of the total variance with the second dimension making up 29%. Because the content in all of the questions involve some specific aspect of legislative procedure, the observed additional dimensions are very likely to be either attributable to problematic question wording or obscurity of the content.

In order to identify and eliminate the items posing these problems, I rotate and then eliminate problematic questions. While orthogonal rotations impose an uncorrelated clusters restriction, oblique rotations allow the simple structure to take its "natural" shape. There are costs and benefits to each of these approaches. Orthogonal rotation strips the effects of questions loading onto the first factor by setting the other factors to a right angles with the first. The orthogonal setup keeps the underlying factors uncorrelated with one another, when in reality there may or may not be overlapping variances. Because oblique rotation does not impose this restriction, and instead allows question loadings to be correlated with one another, it reveals the simplest and most likely representation of the structure underlying the data.[32] This is precisely the goal of the knowledge battery, to uncover a respondent's basic level of knowledge about their chamber. To state this case in a slightly different fashion, consider that clusters of factors underlying the data may measure different aspects of legislative knowledge. For example, the battery contains some questions about procedure and others about chamber organization and these would be distinct underlying clusters, each measuring the concept of interest, legislative knowledge. Therefore, I am interested in how the clusters relate. The factors in an oblique rotation describe how clusters of factors relate to one another, whereas in an orthogonal rotation each individual factor is treated as independent and uncorrelated even if the single factors are closely clustered. Thus, to the extent that all of the knowledge questions correlate with one another on the first factor in an oblique rotated principal factors model, we can assume that the battery has done its job.

In Table 3, the shared variances among items in the full battery are made up of at least 2 prominent factors. These clustered relationships align with the unrotated model in suggesting multiple

[32]Fabriger and Wegener (2012) provide an excellent illustration of these concepts on pages 74-79 of their book.

Table 9: Oblique Rotation Principal Factors Model-Full Battery

	Variance	Proportion
Factor 1	1.52812	0.3847
Factor 2	1.38406	0.3484
Factor 3	0.95630	0.2407
Factor 4	0.69636	0.1753
Factor 5	0.61051	0.1537
Factor 6	0.55711	0.1478
Factor 7	0.44233	0.1114
Factor 8	0.24522	0.01096
Observations	186	
Retained factors	11	
Number of Parameters	154	

Note: Oblimin Rotation Technique Employed

latent dimensions. In order to reduce the data, I examine the factor loadings of the individual survey items in Table 4. The weakest loading item is the filibuster question. This question contributes the smallest amount to the variance common to the other items. As a result, I reduce the battery by eliminating the filibuster item and re-analyzing the factors according to this reduction regiment. I continue this process below by iteratively eliminating drafting office, skeleton bill, discharge petition, committee of the whole (COW), and committee appointment questions based on their lack of shared variance in order to arrive at the set of 11 questions. The results of the 11 question factor analysis are in Tables 11-13.

The unrotated factors from the 11 item battery are shown in Table 4. There is one clear 1st dimension present. There is only one factor with an eigenvalue greater than one and the difference between the first and second dimension is 0.98699, a much greater degree of separation than any of the other models. Additionally, the first dimension now accounts for 82% of the total variance providing a much clearer first dimension. A valid measure of legislative knowledge can now be ascertained from the questions in this reduced version of the battery. The rotated version in Table 5 reports similar figures with the first dimension accounting for 78% of the total variance.

Below, I demonstrate the same data elimination technique I employed in the tables above, but I do so visually through the use of scree plots. Scree plots are plots of eigenvalues for each factor.

Table 10: Rotated Factor Loadings-Full Battery

	Factor 1	Factor 2	Uniqueness
Cosponsor Limit	0.1472	-0.0383	0.7840
Cosponsor Deadline	0.0506	0.0332	0.8557
Filibuster	0.0050	0.0006	0.8591
Bill Intro. Limit	-0.1394	0.0979	0.8748
Skeleton Bill	-0.0241	-0.1092	0.8113
No Floor Amendment	0.0777	0.0145	0.8152
COW Floor Amendment	0.0476	-0.0621	0.8276
Drafting Office	0.0163	-0.0019	0.7741
Germaneness Constitution	-0.0771	-0.0258	0.8254
Germaneness Rules	-0.0338	0.0401	0.7071
Germaneness Committee	0.0979	-0.0269	0.7259
Discharge Petition	0.0214	-0.0244	0.8063
Reference Manual	0.8035	-0.0844	0.3506
Committee Appointment	-0.0421	0.7562	0.4124
Committee Reporting	0.0932	0.0193	0.7044
Committee Proportionality	0.0484	0.0607	0.7416
Committee Assignment	0.0535	0.7381	0.4345
Observations	186		
Retained factors	10		
Number of Parameters	135		

Note: Factors 3-10 are omitted from this table in the interest of space.

Table 11: Unrotated Iterated Principal Factors Model-11 Item Battery

	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	1.52500	0.98699	0.8220	0.8220
Factor 2	0.53801	0.20467	0.2900	1.1120
Factor 3	0.33334	0.16578	0.1797	1.2917
Factor 4	0.16755	0.03703	0.0903	1.3820
Factor 5	0.13053	0.12195	0.0704	1.4523
Factor 6	0.00858	0.06914	0.0046	1.4570
Observations	186			
Retained factors	6			
Number of Parameters	51			
LR Test: $\chi^2(55) = 221.19 Probability\ \chi^2 = 0.0000$height				

Note: Only positive factors are retained.

Table 12: Oblique Rotation Principal Factors Model-11 Item Battery

	Variance	Proportion
Factor 1	1.45476	0.7841
Factor 2	0.86503	0.4663
Factor 3	0.42587	0.2296
Factor 4	0.40519	0.2184
Factor 5	0.33550	0.1808
Factor 6	0.24754	0.1334
Observations	186	
Retained factors	6	
Number of Parameters	51	

Oblimin Rotation Technique Employed

Table 13: Rotated Factor Loadings-11 Item Battery

	Factor 1	Factor 2	Uniqueness
Cosponsor Limit	0.0799	0.0284	0.8235
Cosponsor Deadline	0.0803	-0.0271	0.9014
Bill Intro. Limit	-0.1574	0.3032	0.9221
No Floor Amendment	0.0811	-0.0538	0.9117
Germaneness Constitution	-0.0832	-0.1462	0.8758
Germaneness Rules	-0.0337	0.0223	0.8212
Germaneness Committee	0.1780	-0.0218	0.8079
Reference Manual	0.7893	-0.0081	0.3847
Correct Reference Manual	0.7492	0.0319	0.3794
Committee Reporting	0.0387	0.5008	0.7168
Committee Proportionality	0.0465	0.4580	0.7526
Observations	186		
Retained factors	6		
Number of Parameters	51		

Factors 3-6 are omitted from this table in the interest of space.

Figure 10: Scree Plot From Full Model

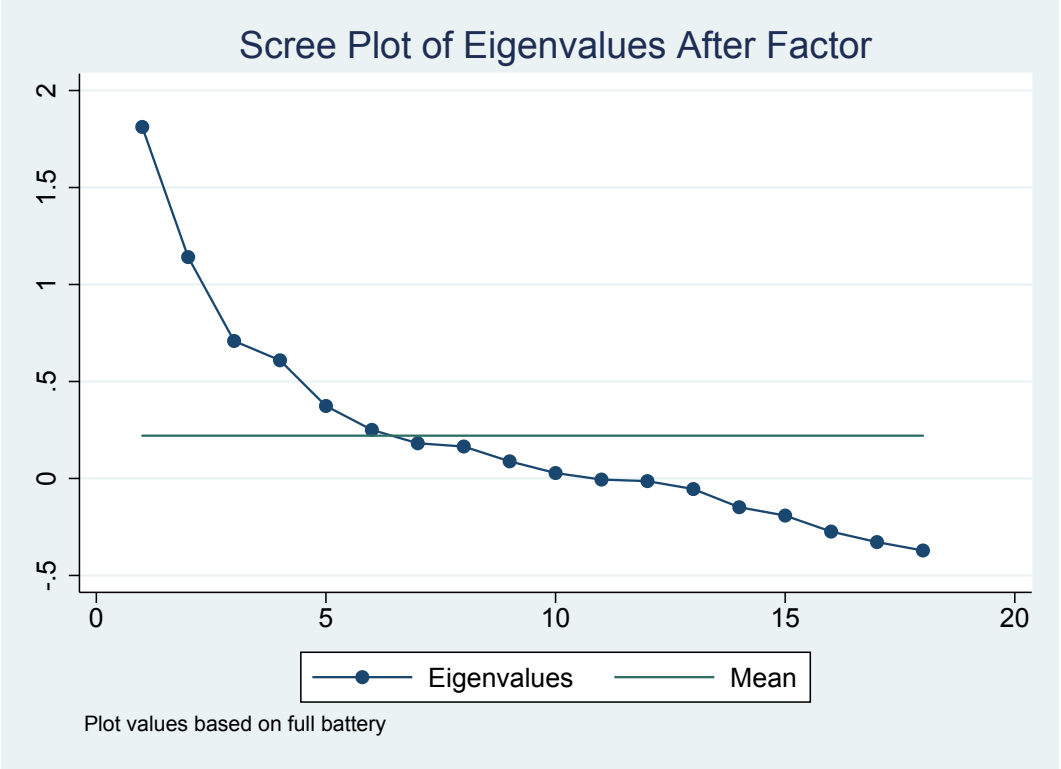


Figure 11: Scree Plot From 11-Item Model

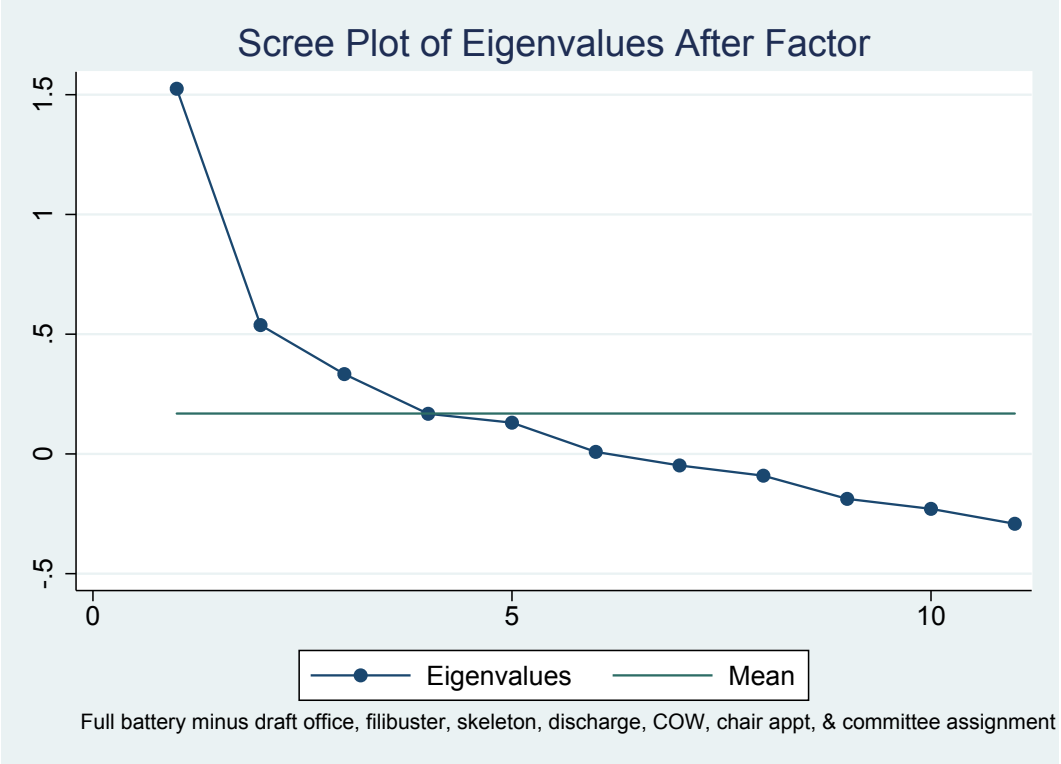


Figure 12: Eigenvalues Plotted From 11-Item Model VS Randomly Generated Data

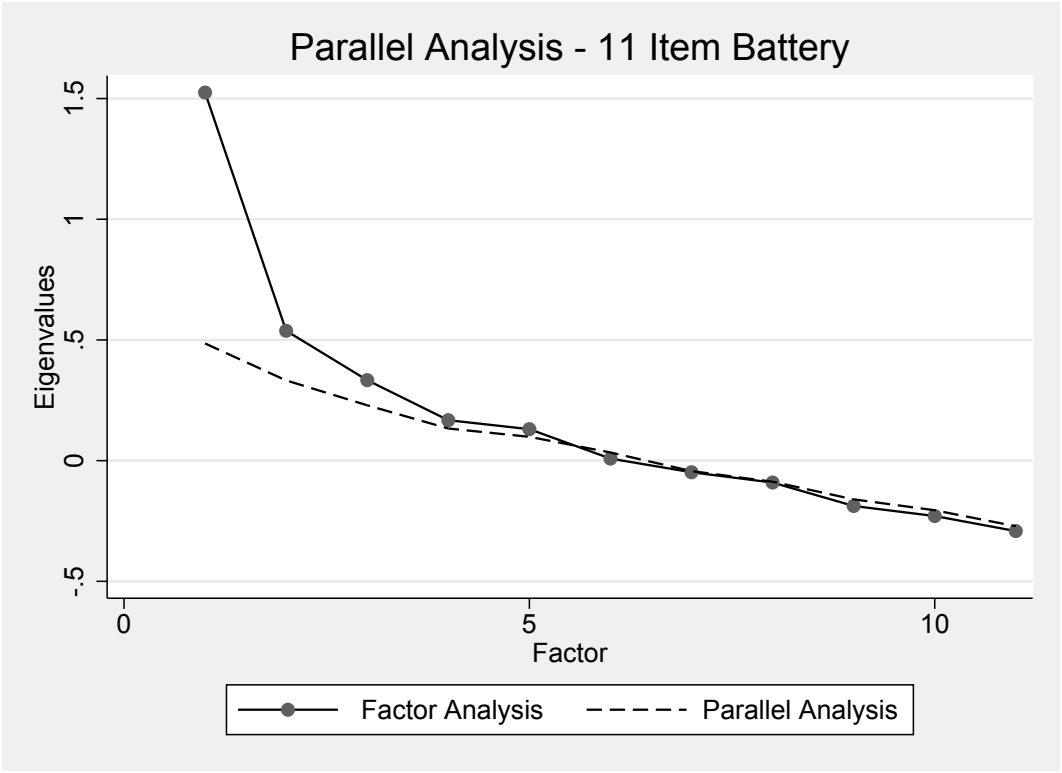


Figure 13: Eigenvalues Plotted From 10-Item Model VS Randomly Generated Data

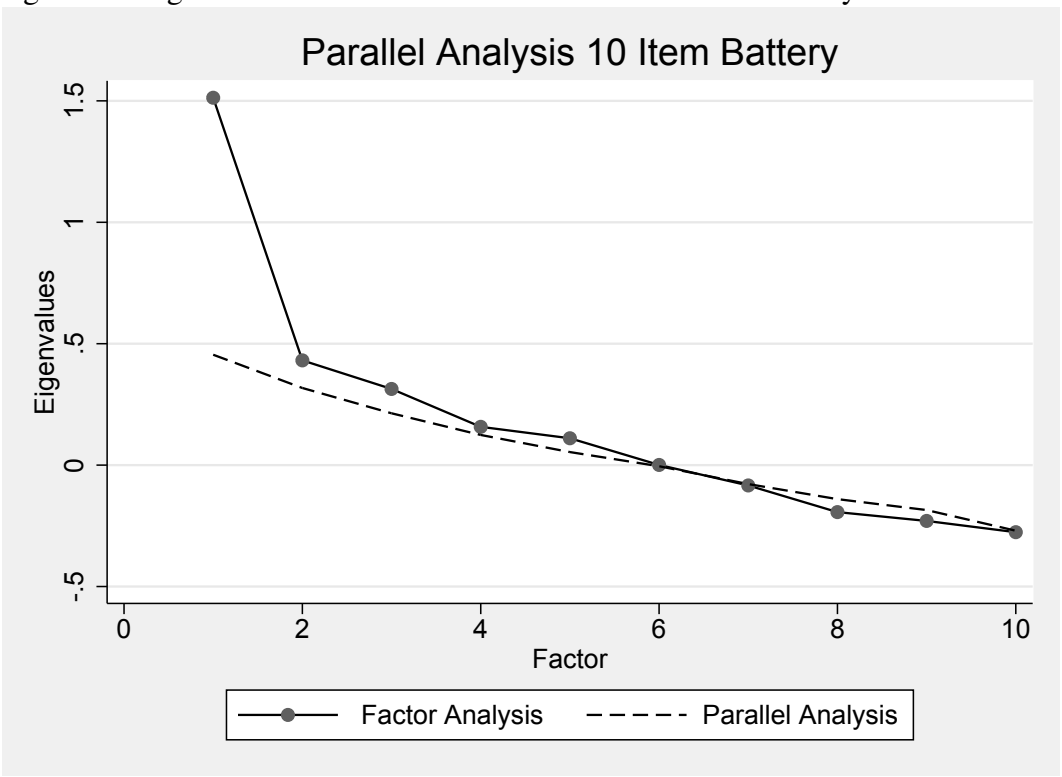
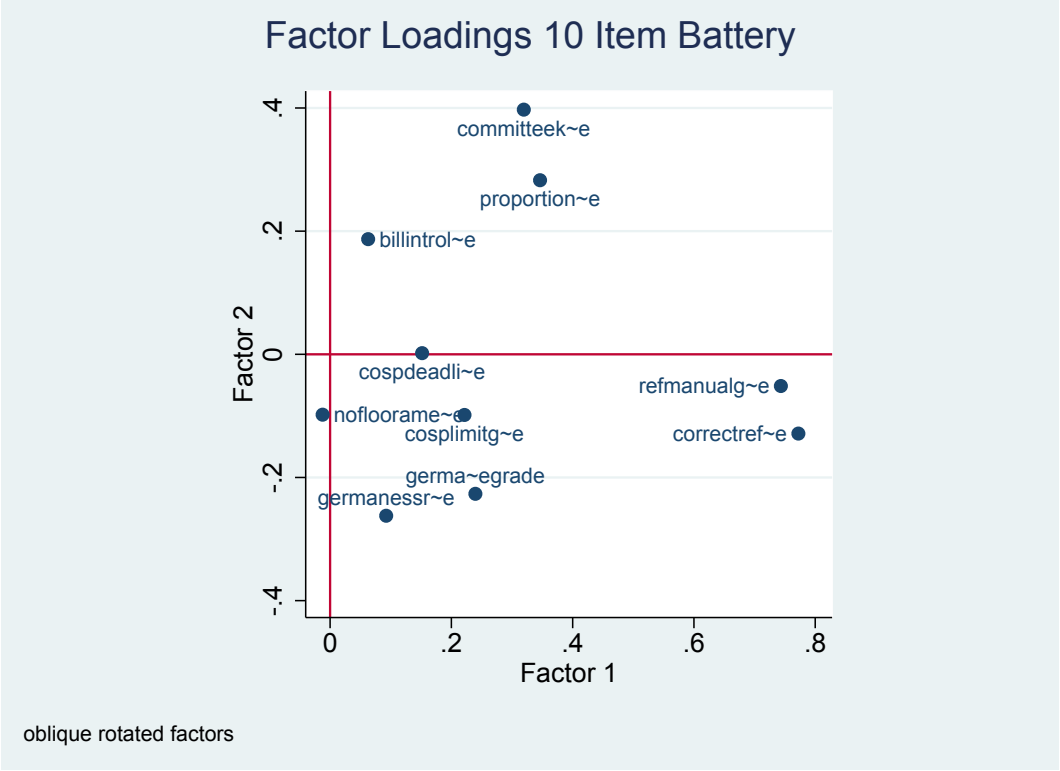


Figure 14: First & Second Factors From Final 10 Questions



The general shape one is looking for in a unidimensional setting is a high first dimension eigenvalue followed by a sharp decline in the second dimension and a tapering trend in the remaining factors. Figure 10 is a scree plot created from the first factor analysis done in Tables 1-3. The scree plot in Figure 10 has a small difference between the first and second factor eigenvalues. Then the values do not taper-off after the third or fourth factor. Figure 11 contains a scree plot obtained from the models analyzed in Tables 5-7.[33] Clearly, there is a large difference between the first and second factors followed by an asymptotic trend among the remaining factors. This supports the notion that the 11-item model has a unidimensional structure. In other words, it measures a single latent concept according to the scree plot structures. Given that each question's content involves some aspect of legislative knowledge, it is safe to assume the latent dimension is in fact, legislative knowledge.

[33] In Appendix B, the other 5 scree plots representing the interim steps in which battery items are eliminated are presented.

While eigenvalue-greater-than-one and scree plot approaches often arrive at the same accurate conclusions regarding the number of factors, it is useful to explore the dimensional structure of the data against a randomly generated set of data. Parallel analysis does just this. Eigenvalues are generated from random data and assessed against the observed data. The number of eigenvalues from the observed data that are substantially larger than eigenvalues from the random data reflect the number of underlying factors that result from the observed data generating process.

In Figure 12, the eigenvalues from the final 11-item battery are plotted with a solid line and eigenvalues from a randomly generated factor analysis are plotted with a dotted line. By comparing each corresponding factor between the two analyses (e.g. observed factor 1 vs random factor 1), you can see the dotted line begins to approximate the solid line around the third factor. This indicates that possibly two factors may underlie these data. Referring back to Table 10, the question regarding germaneness in the state constitution loads relatively low on the first dimension and fairly high on the second dimension. As a result, I drop this question from the analysis and reproduce the parallel analysis in Figure 13. Now the randomly generated eigenvalues approximate the observed eigenvalues beginning with the second factor, indicating a unidimensional structure. Additionally, the factor loadings from the 10-item battery are plotted against their 2nd factors in Figure 13. This final visualization of the reduced data reveals that most of the 10 items contribute substantially to the overall variance in the first dimension. The factor loadings from the final 10-item battery can be assessed visually in Figure 14. Abbreviated tags have been added to each plot point to identify the survey item. The x-axis represents the 1st factor and the y-axis represents the 2nd factor. While there are three clusters of items, all of them load onto the first factor falling to the right-hand side of the vertical axis.

By removing items with low first 1st dimension rotated factor loadings and re-estimating the model, I am able to identify a subset of the knowledge items with a more substantial shared variance among them. These steps are then followed iteratively, removing a single item at each interval, until a set of questions reveals a distinguishable 1st dimension with rotated factor loadings all contributing significantly to the common variance. From these two facts, I extrapolate that these interrelated variables measuring a single underlying concept constitute a valid measurement of knowledge of the common subject area, legislative knowledge. Thus, the percentage of correct

responses on a battery of questions can be taken to be an accurate assessment of a respondent's true underlying amount of procedural knowledge. In the next section, I explore the eliminated questions in detail, offering explanations for their inability to measure legislative knowledge in the present survey. This provides future researchers with a content basis for measuring legislative knowledge.

Best Practices In Measuring Legislative Knowledge

The pool of subjects in American state legislatures has undoubtedly been oversampled in recent years. I received early 50 direct email responses from legislator's offices verbally declining to participate in the study. The excerpt below is an example of the attitude developed by one legislator who would be an otherwise willing participant.

> "I regret that I do not have the time to participate in your survey. Please understand that my colleagues and I receive dozens of just such requests from researchers, grad students, political science and law majors each year. There is absolutely no way that I could comply with each request and I cannot justify doing them for one and not another. I have, therefore, adopted a policy of not participating in any such surveys."

I suspect that many other legislators across the states share in this legislator's jaundiced outlook toward survey requests. The single greatest thing researchers of state legislative politics can do to combat this mounting problem is to organize a single periodic survey.

Clearly, returning a large representative sample is a difficult task when the subjects are state legislators. The present survey is no exception. Table 8 breaks down the sample's characteristics. While my response rate is very low, other surveys with recognizable names and organizations associated with them have had more success (to the tune of 30-40% response rates). For example, NCSL has gone to great lengths to obtain higher response rates and more representative samples.[34]

[34] See http://www.ncsl.org/legislators-staff/legislative-staff/program-evaluation/ways-to-improve-survey-response-rates.aspx for more on how to maximize your survey's response rates.

It is difficult to obtain a representative sample and enough demographic and institutional variation to test many theories using survey data. At the outset, large chambers have a greater likelihood of being in the sample (and they are). Fortuitously, some of the most meaningful institutional characteristics are uncorrelated with chamber size. New Hampshire is, by far, the largest and least professionalized legislature (400 total house members), while Pennsylvania (203), New York (150), and Massachusetts (160) have three of the largest statehouses following the New Hampshire House. Pennsylvania, New York, and Massachusetts also occupy 3 of the top 6 spots in a ranking of Squire (2007)'s professionalism index. A low response rate, especially in the context of state legislatures, introduces other considerable sample problems. With women and minorities already making up a disproportionately small fraction of the total number of legislators, low response rates almost certainly prevent the researcher from garnering enough responses in any one of those categories to conduct meaningful hypothesis tests. Table 8 displays these summary statistics for the present survey by group. There are 186 responses. Despite the low response rate, the sample appears to be generally representative across demographic categories. 22% females in the sample closely matches the 24% of legislators who are female across the U.S. states. The sample is slightly skewed toward white respondents with only 3% African American (vs 9% in U.S. state legislatures). The sample held 3% Hispanics (vs 5%).[35] In terms of partisanship, the sample is representative of the population. 57% of state legislative seats are held by Republicans and the sample contains 56% Republican respondents. The average age of legislators in U.S. state legislatures is 56 and the sample returned an average age of 57. Thus, with the slight exception of African Americans, the sample approximates the demographic and partisan characteristics of the population of U.S. state legislators.

Selecting the content of the questions measuring legislative knowledge must be done scrupulously. The goal of any test hoping to measure knowledge is to choose content that will best distinguish between astute and inattentive legislators, while minimizing measurement error. Questions receiving few incorrect responses or those that all respondents answer correctly are of little use in a knowledge measurement. I choose a set of knowledge questions reflecting the legislative process

[35] Asian and Native respondents in the sample approximated the national totals of 1%.

broadly. Those questions regarding cosponsorship, bill introduction, skeleton bills, germaneness, and the use of drafting offices deal with how bills are created and processed. Those relating to filibusters, amendments, discharge petitions, and committee reporting rights deal with how legislators can influence the success of failure of a bill. Questions about committee assignments, committee chair appointments, and proportionality requirements gauge a legislator's knowledge of the power structure in the chamber. Finally, reference manual questions assess a legislators general knowledge about the procedural rules of the chamber. These contents are specific enough to distinguish an astute legislator from an inattentive one, but not so esoteric as to stump the moderately astute legislator. To keep measurement error low, most of the items are basic yes/no answers to questions about the existence or absence of a particular procedure.[36] This basic format reduces the potential for measurement error due to comprehension failure on the part of the respondent. In addition, it also reduces respondent fatigue by keeping the questions as simple as possible.

After the final parallel analysis is completed above, only 10 of these items survive the data reduction process. In other words, 9 questions did not, in practice, meet the goal of adequately distinguishing the astute from the inattentive. The problematic questions, based on the reduction analysis above, are the questions relating to drafting office, filibuster, skeleton bill, discharge petition, committee of the whole (COW), committee appointment powers, and germaneness in the constitution. None of the three questions presented in multiple choice format (the two committee assignment questions and the drafting office question) made the cut. The fact that the proportionality requirements question loads onto the legislative knowledge dimension and the committee assignment questions do not suggests that multiple choice format questions are problematic in the context of measuring legislative knowledge. The drafting office and skeleton bill questions are the only items among the bill processing questions that do not load well onto the legislative knowledge dimension. Given the discovery that multiple choice format is not helpful, it is no surprise that the drafting office items misses the cut. The best explanation for the skeleton bill item's poor performance is the complexity of the information in the stem of the question. The filibuster and discharge

[36]The two items regarding committee assignments and the drafting office question are presented in multiple-choice format due to the large number of possible responses. This turns out to be a bad format choice, as discussed below.

petition questions also fail to make the final cut. The explanation of this is twofold. First, most legislatures have a written rule suggesting the existence of a discharge petition, but in practice it is rarely used. We know it is rarely attempted Congress and information gathered from informal phone calls with legislative clerks suggest that the practice is not widely used at the state level. Second, observers of state legislatures know that the rules followed in practice often do not match the official rule books. Both the filibuster and the discharge petition are likely to be subject to this limitation. Last, the germaneness in the constitution question is eliminated most likely because it is a question regarding the content of the constitution rather than the specified rules of the chamber.

In sum, there are several content-specific and survey design guidelines for measuring legislative knowledge to be learned from this analysis:

1. Avoid content that is seldom addressed in legislative practice
2. Avoid content that is broadly interpretable or that may be easily overlooked in practice as a legislative norm
3. Keep question wording simple and direct
4. Use dichotomous yes/no response formats

Discussion

Legislative knowledge is important to democratic politics in two respects. One, if legislators are to impact policy on behalf of their constituents, then they will need to know when, where, and how to do so. For example, knowing whether amendments to bills must be germane provides a legislator with the ability to object to an amendment set forth by an adversary. Citizens might reasonably expect legislators to know what procedures are available to them in order to block or promote particular issues and legislation. If legislative knowledge is part of what citizens expect of their representatives, then legislators with knowledge will be better representatives. There are also trends in institutional change that will likely affect legislative knowledge. If de-professionalization of state legislatures continues, then one can expect legislators to have less legislative knowledge. Party leaders, other legislators who are procedural wonks, and astute lobbyists may increase their

informational advantage over legislators as a result. In a strict principal-agent sense, legislators will be less capable of representing their geographic constituents independently from other influences on their behavior.

Two, when legislators have experience and knowledge they are better equipped to craft long term policy (Kousser, 2006). One of the most arduous tasks for legislators in today's political environment is to pass a basic budget. Last year, nearly a third of states either passed a budget at the final hour or failed altogether to agree on spending for the upcoming year.[37] In North Carolina (2015), for instance, temporary resolutions were used to buy more time. As successful legislation passed via traditional bill paths and with long-term foci becomes increasingly rare, understanding the rules of the game becomes increasingly important to influencing policy in one's preferred direction.

The present research provides several recommendations for how to best measure legislative knowledge: avoid esoteric content, keep question wording simple and direct, and make use of dichotomous yes/no response formats. However, even when implementing these best practices, chamber norms develop that may ignore the official procedures. It is likely the case that legislators who exhibited low levels of knowledge did so because de facto procedural norms often do not match the formal written rules of the chamber. For example, one upper chamber leader in the data set indicated that committees are able to kill bills when the chamber's published rules require committees to report all bills referred to them. An anecdote from the Texas Legislature illustrates this possibility well. In 2011, a practice know as "ghost voting" publicly reported as being a common occurrence. A legislator "ghost" votes for an absent legislator simply by leaning over her floor desk and casting a yea or nay vote on a colleague's voting machine. This even occurs across party lines. The practice is considered a norm even though it is strictly prohibited in the codified rules of the chamber[38] Despite this, members have reported abstaining on votes in which an unknown member

[37] http://www.nytimes.com/2015/07/02/us/illinois-far-from-alone-in-struggling-to-pass-a-state-budget.html.

[38]Rule 5 Section 47 states: "Any member found guilty by the house of knowingly voting for another member on the voting machine without that other members permission shall be subject to discipline deemed appropriate by the house."

cast a vote on the absent legislator's behalf.[39] Clearly, legislative norms often surpass the codified rules of the chamber. This presents a validity problem when measuring legislative knowledge and future studies would do well to consider the nuances of norms and written procedures within the concept of legislative knowledge.

[39] See http://www.chron.com/news/article/Ghost-voting-in-House-common-but-against-rules-1941075.php and https://www.youtube.com/watch?v=eG6X-xtVask.

Conclusion

The present research investigates three facets of legislative politics that impact how legislators behave: parties, socioeconomics, and legislative knowledge. Chapter 1 describes anti-partisan political reforms and assesses whether they achieve their desired ends. Simultaneously, it provides an answer to a prominent question regarding political influence: Do parties matter? Much of the existing research suggests they do matter, but disagrees over how scholars ought to distinguish partisan influence from ideological preferences. The analyses above provides additional evidence that parties do matter. It also suggests that historical context is an integral first step to understanding where one might observe partisan effects. In 1910s Minnesota, the national and statewide Progressive and Prohibition movements had profound effects on legislative politics. The analyses in Chapter 1 reveal that, in terms of the dimensional structure of roll call votes, partisanship is best observed on the second dimension. This result provides evidence that reforms of the electoral and legislative organization processes can achieve its intended impact of mitigating the effects of party organizations. The results also reinforce existing scholarly notions about the tools party organizations use to package issue for the electorate and discipline their members within legislative institutions.

Chapter 2 considers the concept of representational consistency in democratic politics. Consistent representatives provide greater certainty to constituent investors than inconsistent legislators. While most of the literature on the effects of growing income inequality suggests it has adverse affects on the ability of middle class and poor citizens to influence the political process, this chapter demonstrates that income inequality increases predictability of legislative behavior. The juxtaposition of inequality's detrimental effect on democratic representation and its positive effect on legislative consistency presents a dichotomy. This contrariety implies constituents should be able to better evaluate representatives in highly unequal environments, yet we observe extremely high rates of incumbent reelection in highly unequal districts. Assuming that high income individuals' disproportionate impact on the political process implies weaker representation for middle and low income individuals, we should observe higher rates of incumbent defeat in unequal districts because their representatives are predictably unrepresentative of the majority of constituents. The dearth of incumbent defeats amid rising inequality lends a great deal of additional import to ongoing investigations of disproportionate representation among the economically advantaged.

The final substantive chapter investigates legislative knowledge, or the capacity of a legislator and her staff to parlay their understanding of the legislative process and power dynamics in the chamber to their own individual benefit. Being an underrepresented minority, a female, a chamber leader, a committee chair, or having static political ambition ought to compel legislators to learn the legislative process. In order to assess empirically whether these characteristic do in fact lead to legislative knowledge and whether legislative knowledge generate effective legislators, a valid and reliable measurement tool is required. Chapter 2 develops such a tool and assesses its performance on a sample of legislators from the American states. The results suggest some best practices for such an endeavor.

Chapter 3 makes two strides toward research into legislative knowledge. Defined as the cognitive ability of a legislator to navigate the legislative process via procedural rules and comprehension of chamber power dynamics, legislative knowledge is a largely unexplored, high impact part of legislative behavior. To start, Chapter 3 generates several testable hypotheses rooted in various veins of literature. Then, I present results from a survey of legislators in the American states asking members to report on their knowledge about procedural rules and leadership powers. First, the legislative knowledge concept is developed. Next, the responses are used to investigate whether legislators' procedural knowledge exists along one or more latent dimensions. A series of factor analytic techniques are then used to assess the content and question wording of the survey items in order to determine which ones best measure legislative knowledge. A discussion is provided with regard to best practices and future directions for research. Together these three investigations into the causes and consequences of legislative behavior provide unique insights into the internal organization and structure of legislatures as well as the external forces that shape how legislators make decisions.

Appendix A - Model Controlling for Dichotomous Urban Measure

Table 14: OLS Results

	Dependent variable:			
	1st Dimension Coords 37th	1st Dimension Coords 39th	2nd Dimension Coords 37th	2nd Dimension Coords 39th
Republican	0.431^{***}	0.235^{***}	-0.325^{***}	-0.109
	(0.089)	(0.090)	(0.098)	(0.090)
Prohibition	1.026^{***}	0.571^{***}	-0.135	-0.100
	(0.215)	(0.079)	(0.233)	(0.079)
Socialist	0.939^{**}	0.338	-0.071	0.271
	(0.412)	(0.433)	(0.446)	(0.432)
Never Partisan		0.181^{**}		-0.064
		(0.087)		(0.087)
Urban	-0.437^{***}	-0.192^{**}	-0.626^{***}	-0.434^{***}
	(0.080)	(0.081)	(0.087)	(0.081)
Constant	-0.277	-0.306^{***}	0.421^{***}	0.274^{***}
	(0.082)	(0.101)	(0.089)	(0.100)
Observations	119	130	119	130
R^2	0.368	0.118	0.360	0.196
Adjusted R^2	0.345	0.097	0.338	0.163
Residual Std. Error	0.400 (df = 114)	0.497 (df = 124)	0.434 (df = 114)	0.421 (df = 124)
F Statistic	16.560^{***} (df = 114)	16.03^{**} (df = 124)	16.030^{***} (df = 114)	6.028^{**} (df = 124)

Note: *p<0.10; **p<0.05; ***p<0.01

Appendix B - Using District History to Code Partisan Affiliations in the 39th Session

1. C.H. Baldwin represented Rock County, but had never been elected on a partisan ballot. 1886 was the last election in which Rock County elected a legislator that was not Republican, John F. Shoemaker was Independent. Thus, Baldwin received a Republican affiliation.

2. William L. Bernard represented St. Louis County, never having been elected on a partisan ballot. St. Louis County elected multiple seats to the legislature. The county had elected a Democrat as recently as the 38th Session, although it had elected Republicans in that session as well. Based on Bernard's affiliation with farming and labor and the mixed electoral history of the county, I assigned Bernard no party affiliation (all other cases of no artificial partisan designation follow this line of reasoning).

3. John H. Boyd represented Polk County, never having been elected on a partisan ballot. Polk County last elected a non-Republican in 1896 during the Populist Movement. With nearly two decades of uninterrupted Republican representation, I assigned Boyd an artificial Republican designation.

4. Theodore Christianson, Jr.'s political career would lead him to the U.S. House where he was a Republican in the 1930s. He received a Republican designation.

5. Leavitt Corning, Sr. was designated by the Minnesota Legislative Reference Library as a prior member of the Republican Party.

6. Farley Allen Dare represented Cass County. While parts of Cass County made up parts of several districts, no district encompassing any portion of Cass County elected a non-Republican in the 10 years leading up to the 39th. Therefore, Dare received an artificial Republican designation.

7. Levi M. Davis represented Todd County. While parts of Todd County made up parts of several districts, no district encompassing any portion of Todd County elected a non-Republican in the 10 years leading up to the 39th. Therefore, Davis received an artificial Republican designation.

8. George William Dealand represented Nobles County. While parts of Nobles County made up parts of two districts, neither district encompassing any portion of Nobles County elected a non-Republican in the 10 years leading up to the 39th. Therefore, Davis received an artificial Republican designation.

9. George W. Grant represented Cottonwood County, never having been elected on a partisan ballot. Cottonwood County had not elected a non-Republican at least since 1904 and possibly longer. With at least a decade of uninterrupted Republican representation, I assigned Grant an artificial Republican designation.

10. Peter H. Konzen represented Kittson County. While parts of Kittson County made up parts of several districts, no district encompassing any portion of Kittson County elected a non-Republican in the 10 years leading up to the 39th. Therefore, Konzen received an artificial Republican designation.

11. James E. Madigan represented Wright County, never having been elected on a partisan ballot. Wright County had not elected a non-Republican at least since 1904 and possibly longer. With at least a decade of uninterrupted Republican representation, I assigned Madigan an artificial Republican designation.

12. A.M. Peterson represented Itasca County. While parts of Itasca County made up parts of several districts, no district encompassing any portion of Itasca County elected a non-Republican in the 10 years leading up to the 39th. Therefore, Peterson received an artificial Republican designation.

13. Ole A. Pikop represented Grant County. While parts of Grant County made up parts of several districts, no district encompassing any portion of Grant County elected a non-Republican in the 10 years leading up to the 39th. Therefore, Pikop received an artificial Republican designation.

14. Spencer J. Searls represented Carlton County. While parts of Carlton County made up parts of several districts, no district encompassing any portion of Carlton County elected a non-Republican in the 10 years leading up to the 39th. Therefore, Searls received an artificial

Republican designation.

15. Henry Smith represented Lincoln County. While parts of Lincoln County made up parts of several districts, no district encompassing any portion of Lincoln County elected a non-Republican in the 10 years leading up to the 39th. Therefore, Smith received an artificial Republican designation.

16. Gilbert Sorflaten represented Mower County, never having been elected on a partisan ballot. Mower County had not elected a non-Republican at least since 1904 and possibly longer. With at least a decade of uninterrupted Republican representation, I assigned Sorflaten an artificial Republican designation.

17. Thomas Tollefson represented Dodge County, never having been elected on a partisan ballot. Dodge County had not elected a non-Republican at least since 1904 and possibly longer. With at least a decade of uninterrupted Republican representation, I assigned Tollefson an artificial Republican designation.

18. A.C. Welch represented McLeod County, never having been elected on a partisan ballot. McLeod County had not elected a non-Republican at least since 1904 and possibly longer. With at least a decade of uninterrupted Republican representation, I assigned Tollefson an artificial Republican designation.

Appendix C - URLs for Chapter 2 Anecdote

- http://www.tampabay.com/news/politics/stateroundup/norman-bramans-support-could-prove-pivotal-for-marco-rubios-presidential/2222199
- http://www.tampabay.com/blogs/the-buzz-florida-politics/jeb-bush-republicans-need-to-get-outside-of-our-comfort-zone/2230713
- http://www.politico.com/story/2015/04/marco-rubio-2016-campaign-norman-braman-1171 34.html
- http://www.nytimes.com/2015/05/10/us/billionaire-lifts-marco-rubio-politically-and-person-ally.html

Appendix D - State Legislator Questionnaire

You are being invited to participate in a research project conducted by Lucas Williams from the Department of Political Science at the University of Houston, PhD candidate. This questionnaire is part of a doctoral dissertation being directed by researchers at the University of Houston under the supervision of Dr. Jennifer Clark. The questionnaire should take approximately 10 minutes. Your contributions are voluntary and the studys administrator will keep them in a secure private location. The studys intention is to collect data regarding legislators and their usage of different institutional features in their chambers and responses will be collected for up to 6 months in early 2015. Submitting this questionnaire indicates your consent to participate in this research. A total of approximately 7, 000 subjects at 50 locations will be asked to participate in this project. All elected members of your chamber with email addresses will be asked to participate in this survey. Your name will not be released upon any publication of the results of this research. You may opt out at any time. Participation in this project is voluntary and the only alternative to this project is non-participation. The results of this study may be published in professional and/or scientific journals. It may also be used for educational purposes or for professional presentations. However, no individual subject will be identified. There is no manipulation in the following questionnaire and no foreseeable risks are involved. Your time and participation devoted to this study are greatly appreciated. Thank you. For questions, please contact Lucas Williams, PhD candidate at the University of Houston by email at rlwill21@central.uh.edu or by phone at 414-982-5853 and Dr. Jennifer Clark by email at jclark10@uh.edu or by phone at 713-743-3302.

ANY QUESTIONS REGARDING YOUR RIGHTS AS A RESEARCH SUBJECT MAY BE ADDRESSED TO THE UNIVERSITY OF HOUSTON COMMITTEE FOR THE PROTECTION OF HUMAN SUBJECTS (713-743-9204).

1. How many terms have you been a member of your chamber? Please select a number from the drop-box.

2. Which of the following best describes your background in terms of occupation?

    - Doctor
    - Lawyer

- Academic
- Business person
- Student
- Athlete
- Teacher/Educator
- Public servant/Government worker
- Farmer
- Artist
- Writer
- Religious figure such as a priest, preacher, or rabbi
- Other. Please describe.

3. Do you plan to run for another elected office someday?

    - No
    - Yes
    - If no, then do you plan to retire or continue working in another profession?
        - Retire
        - Continue working
    - If you plan to continue working, will it be in politics or some other field?
        - Politics
        - Another profession

4. How much do you interact with members of the opposing chamber on matters of procedure? (Not given in Nebraska)

    - never
    - seldom

- often
- always

5. How much do you interact with members of the opposing chamber on matters of policy? (Not given in Nebraska)
    - never
    - seldom
    - often
    - always
6. On which committee would you most prefer to be seated?
7. Which committee do you believe is the most powerful?
8. On a scale from 1 to 7, what do you think is the relative influence of the following actors in determining legislative outcomes in your chamber?

    1=No influence 7=Dictates policy

    - Majority party leadership
    - Minority party leadership
    - Committee chairs
    - Governor
    - Bureaucrats/civil servants
    - Interest groups
    - Mass media
    - The other chamber
    - Legislative staff
9. Is there a limit on the number of co-sponsors allowed on a single bill in your chamber?
    - No

- yes

10. Is there a deadline for adding co-sponsors to a bill in your chamber?

    - No
    - yes

11. Are bills in your chamber required to have co-sponsors in both chambers of the legislature? (Not given in Nebraska)

    - no
    - yes

12. Does your chamber have provisions allowing legislators to conduct a filibuster?

    - no
    - yes

13. Is there a limit on the number of bills a legislator may introduce in a single session in your chamber?

    - no
    - yes

14. Does your chamber permit the use of short-form or "skeleton" bills? These are examples of a procedure that makes use of bill outlines in place of full-length bills pending their full authorship.

    - no
    - yes

15. Please indicate which of the following Statements are true about the way floor amendments are handled in your chamber most of the time (please select all that apply).

    - Floor amendments are not allowed in my chamber, only in committee.

- Floor amendments are typically handled under committee of the whole (COW).
- Most floor amendments are drafted by or require review by a drafting office before being considered on the floor.

16. Is there a germaneness provision in your state's constitution that limits bills to a single subject area?
    - No
    - yes
    - It is up to each committee.
17. If no, is there a germaneness provision in your chamber rules?
18. Is germaneness enforced at the committee stage in your chamber?
    - No
    - yes
19. Is there a mechanism in your chamber by which a bill in committee can be removed and placed on the calendar for a floor vote (the is often referred to as a "discharge petition")?
    - No
    - yes
20. Many chambers have outside reference manuals to which they refer for issues not addressed in the chamber rules. Does your chamber have one of these?
    - no
    - yes
    - If yes, please indicate which reference guide (you may select more than one):
    - Reed's Parliamentary Rules
    - Mason's Manual
    - Jefferson's Manual

- Robert's Rules of Order

21. What is the primary source of committee assignments in your chamber?

    - The speaker of the House or president of the Senate
    - The president pro tem or speaker pro tem or majority leader
    - Seniority based
    - Lieutenant Governor appoints (serving as presiding officer)
    - Committee on committees
    - Rules committee
    - Management committee
    - Secret ballots
    - Committee requests are voted on openly by the chamber

22. What is the primary way committee chairs are appointed in you chamber?

    - The speaker of the House or president of the Senate
    - The president pro tem or speaker pro tem or majority leader
    - Seniority based
    - Lieutenant Governor appoints (serving as presiding officer)
    - Committee on committees
    - Rules committee
    - Management committee
    - Secret ballots
    - Committee requests are voted on by the chamber
    - Each committee elects a chair from its membership

23. When a bill is referred to a committee in your chamber, is the committee required to report it or can the committee "kill" the bill?

- Committees must report bills
- Committees can block bills from moving forward

24. Often called a "proportionality requirement," are committees in your chamber required to have the same partisan makeup as the chamber at large?

    - Yes
    - No

25. On a scale of 1 to 10, please indicate how much you rely on the following actors for details on the legislative process and procedural rules in your chamber.

    1=Never 10=Always

    - Your own knowledge
    - Your staff
    - The majority party's chamber leadership
    - The minority party's chamber leadership
    - A legislator who both parties regard as a procedural expert
    - A legislator who your party regards as a procedural expert
    - The chamber clerk's office
    - Some other resource (please provide a short description of the resource below)

26. From time to time, legislators turn to one another for advice about how to vote on pending legislation. Please list up to five other legislators to whom you would turn for advice about legislation.

27. Who do you consider your five closest friends in the chamber - those members who you see frequently outside the chamber?

28. What is your gender?

    - Male

- Female

29. What is your race?

    - African American
    - Hispanic
    - White
    - Asian/Pacific Islander
    - Native American
    - Other

30. Please indicate your age as of today.

31. To which party do you belong?

    - Republican
    - Democrat
    - Other. Please indicate which

32. Please indicate your highest level of education.

    - PhD
    - Master's Degree
    - Bachelor's Degree
    - Associate's Degree
    - Some college
    - High school diploma
    - No high school diploma

Thank you for your participation in this confidential study.

Appendix B - Supplementary Factor Analysis Results

Figure 15: Scree Plot From Full Model Minus Filibuster

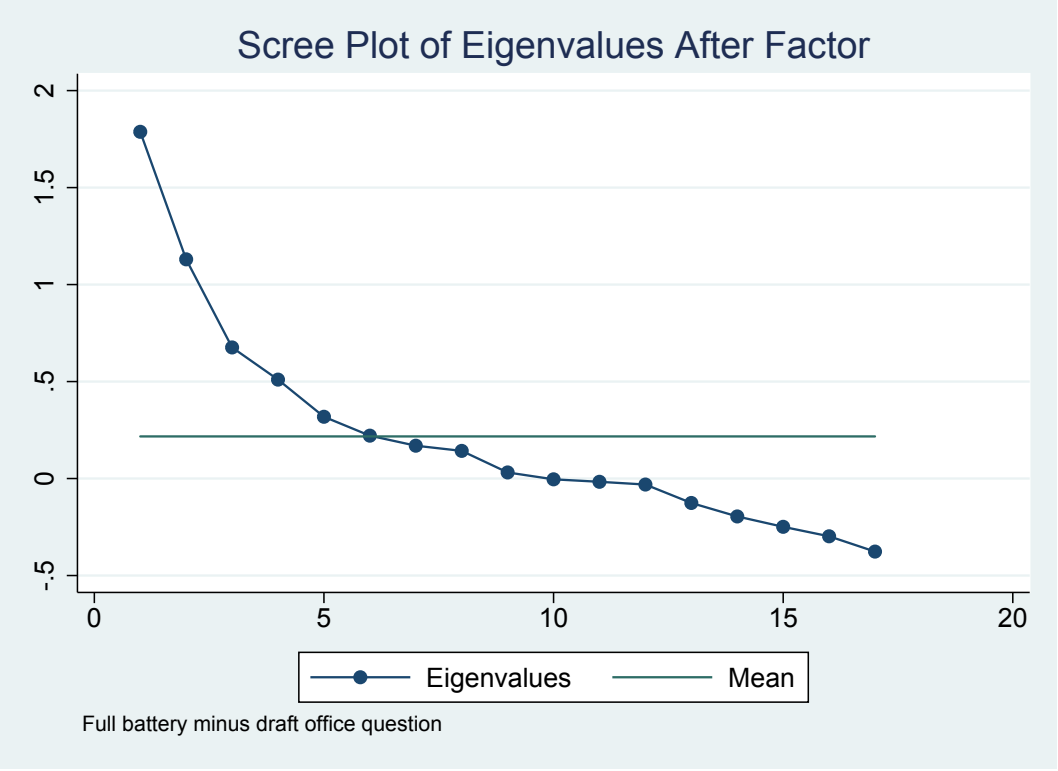


Figure 16: Scree Plot From Full Model Minus Filibuster & Drafting Office

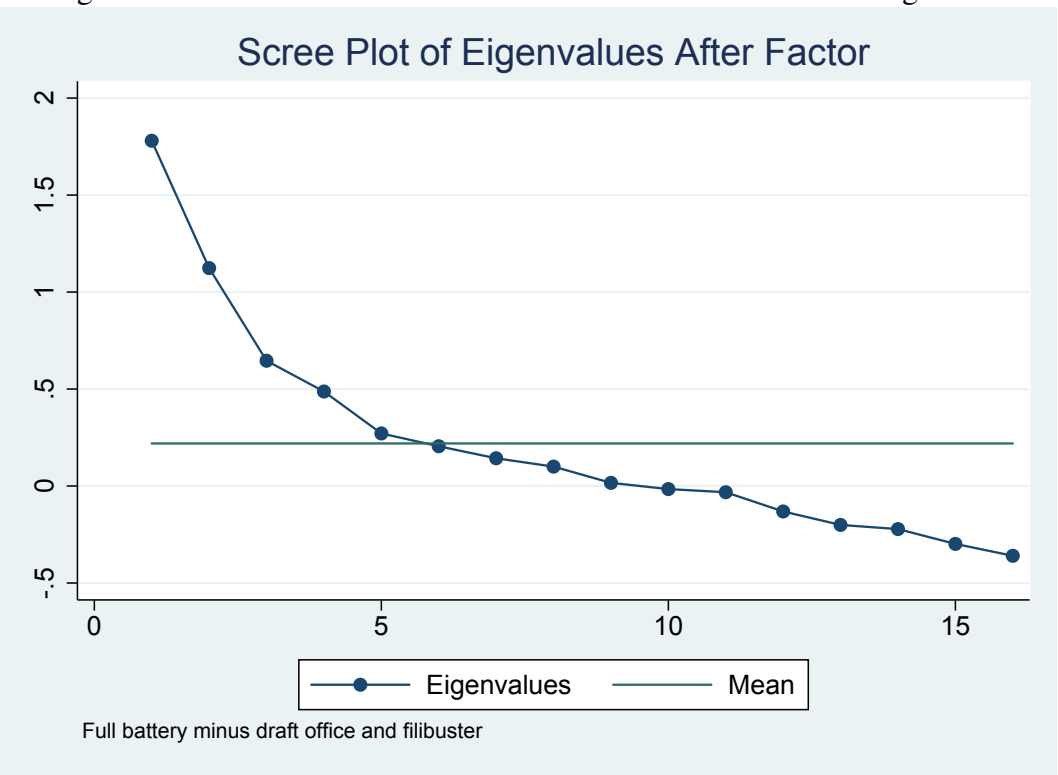


Figure 17: Scree Plot From Full Model Minus Figure 16 & Skeleton Bill

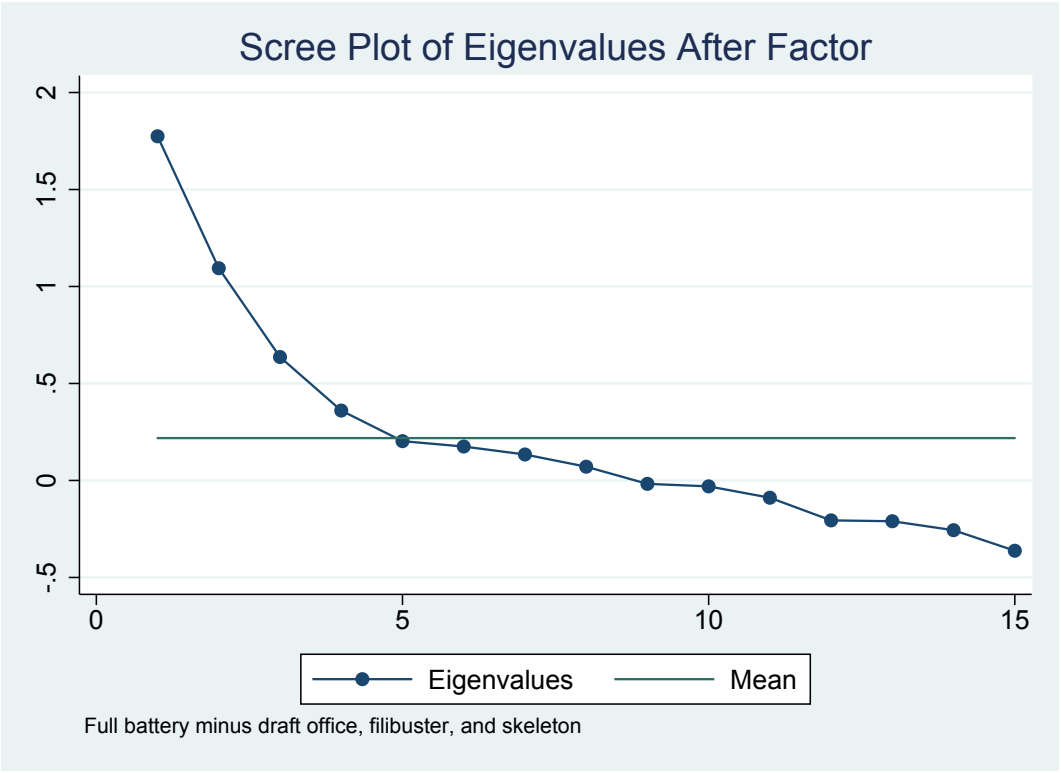
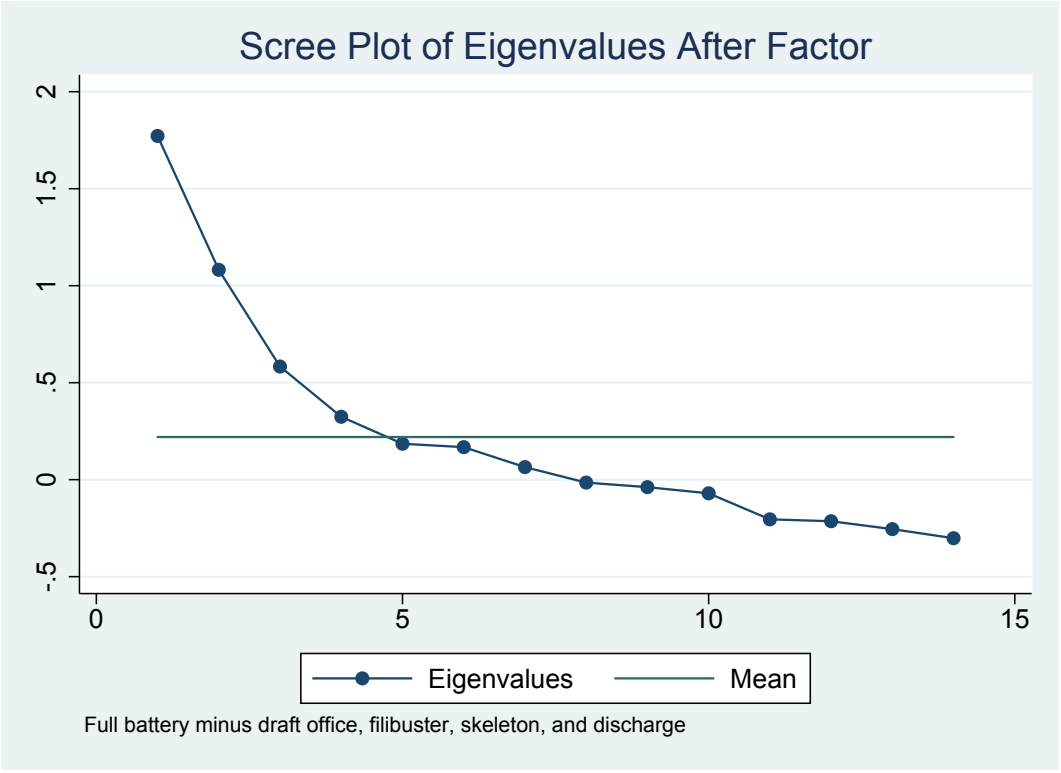


Figure 18: Scree Plot From Full Model Minus Figure 17 & Discharge Petition



References

Aberbach, Joel D. and Bert A. Rockman. 2002. "Conducting and Coding Elite Interviews." *PS: Political Science and Politics* 35(4):673–676.

Adrian, Charles R. 1952. "The Origin of Minnesota's Nonpartisan Legislature." *Minnesota History* 33(4):155–163.

Aldrich, John H. and James S. Coleman Battista. 2002. "Conditional Party Government in the States." *American Journal of Political Science* 46(1):164–172.

Ansolabehere, Stephen, James M. Jr. Snyder and Charles III Stewart. 2001. "Candidate Positioning in U.S. House Elections." *American Journal of Political Science* 45(1):136–159.

Anzia, Sarah F. and Christopher R. Berry. 2011. "The Jackie (and Jill) Robinson Effect: Why Do Congresswomen Outperform Congressmen?" *American Journal of Political Science* 55(3):478–493.

Anzia, Sarah F. and Molly C. Jackman. 2013. "Legislative Organization and the Second Face of Power: Evidence from U.S. State Legislatures." *The Journal of Politics* 75(1):210–224.

Arnold, R. Douglas. 1990. *The Logic of Congressional Action*. Yale University, New Haven, CT.

Bailey, Michael and David W. Brady. 1998. "Heterogeneity and Representation: The Senate and Free Trade." *American Journal of Political Science* 42(2):524–544.

Barrett, Edith J. 1997. "Gender and Race in the State House: The Legislative Experience." *The Social Science Journal* 34(2):131–144.

Bartels, Larry M. 2008. *Unequal Democracy: The Political Economy of the New Gilded Age*. Princeton University Press, Princeton, NJ.

Berry, Jeffrey M. 2014. "Validity and Reliability in Elite Surveys." Online.
URL: *www.apsanet.org*

Bianco, William T. and Itai Sened. 2005. "Uncovering Evidence of Conditional Party Government: Reassessing Majority Party Influence in Congress and State Legislatures." *American Politial Science Review* 99(3):361–371.

Bishin, Benjamin G. 2000. "Constituency Influence in Congress: Does Subconstituency Matter?" *Legislative Studies Quarterly* 25(3):389–415.

Bonica, Adam, Nolan McCarty, Keith T. Poole and Howard Rosenthal. 2013. "Why Hasn't Democracy Slowed Rising Inequality?" *Journal of Economic Perspectives* 27(3):103–124.

Bowen, Daniel C. and Zachary Greene. 2014. "Should We Measure Professionalism with an Index? A Note on Theory and Practice in State Legislative Professionalism Research." *State Politics and Policy Quarterly* 14(3):277–296.

Bratton, Kathleen A. 2005. "Critical Mass Theory Revisited: The Behavior and Success of Token Women in State Legislatures." *Politics and Gender* 1(1):97–125.

Buell, C.J. 1915. *The Minnesota Legislature of 1915*. 2 ed. 1540 Laurel Avenue, St. Pal, Minn: Buell, C.J.

Butler, Daniel M. and David W. Nickerson. 2011. "Can Learning Constituency Opinion Affect How Legislators Vote? Results from a Field Experiment." *Quarterly Journal of Political Science* 6:55–83.

Butler, Daniel M. and Eleanor Neff Powell. 2014. "Understanding the Party Brand: Experimental Evidence on the Role of Valence." *The Journal of Politics* 76(2):492–505.

Carroll, Royce and Jason Eichorst. 2013. "The Role of Party: The Legislative Consequences of Partisan Electoral Competition." *Legislative Studies Quarterly* 38(1):83–109.

Carsey, Tom M. and Barry Rundquist. 1999. "Party and Committee in Distributive Politics: Evidence from Defense Spending." *The Journal of Politics* 61(4):1156–1169.

Chrislock, Carl Henry. 1971. *The Progressive Era in Minnesota, 1899-1918*. Minnesota Historical Society, St. Paul.

Clark, Jennifer Hayes. 2012. "Examining Parties as Procedural Cartels: Evidence from the U.S. States." *Legislative Studies Quarterly* 37(4):491–507.

Clark, Jennifer Hayes and R. Lucas Williams. 2016. "Leadership Power, Preference Homogeneity, and Legislative Party Conflict." Paper prepared for 2016 Meeting of Midwest Political Science Association.

Cox, Gary W. and Keith T. Poole. 2001. "On Measuring Partisanship in Roll-Call Voting: The U.S. House of Representatives, 1877-1999." *American Journal of Political Science* 46(3):477–489.

Cox, Gary W. and Mathew D. McCubbins. 1993. *Legislative Leviathan: Party Government in the House*. University of California Press, Berkley.

Cox, Gary W. and Mathew D. McCubbins. 1994. "Bonding, Structure, and the Stability of Political Parties: Party Government in the House." *Legislative Studies Quarterly* 19(2):215–231.

Cox, Gary W. and Mathew D. McCubbins. 2005. *Setting the Agenda: Responsible Party Control in the U.S. House of Representatives*. Cambridge University Press.

Cox, Gary W., Thad Kousser and Mathew D. McCubbins. 2010. "Party Power or Preferences? Quasi-Experimental Evidence from American State Legislatures." *The Journal of Politics* 72(3):799–811.

Cribari-Neto, Francisco and Achim Zeileis. 2010. "Beta Regression in R." *Journal of Statistical Software* 34(2):1–24.
URL: *http://www.jstatsoft.org/v34/i02/*

Curtin, Richard, Stanley Presser and Eleanor Singer. 2005. "Change in Telephone Survey Nonresponse Over the Past Quarter Century." *Public Opinion Quarterly* 69(1):87–98.

Downs, Anthony. 1957. *An Economic Theory of Democracy*. Harper Collins Publishers, New York.

Druckman, James N. and Lawrence R. Jacobs. 2006. "Lumpers and Splitters: The Public Opinion Information that Politicians Collect and Use." *Public Opinion Quarterly* 70(4):453–476.

Dyck, Joshua J. and Edward L. Jr. Lascher. 2009. "Direct Democracy and Political Efficacy Reconsidered." *Political Behavior* 31(3):401–427.

Ellickson, Mark and Donald E. Whistler. 2000. "A Path Analysis of Legislative Success in Professional and Citizen Legislatures: A Gender Comparison." *Women & Politics* 21(4):77–103.

Enns, Peter K. and Julianna Koch. 2013. "Public Opinion in the U.S. States: 1956 to 2010." *State Politics and Policy Quarterly* 13(3):349–372.

Fabriger, Leandre R. and Duana T. Wegener. 2012. *Understanding Statistics: Exploratory Factor Analysis*. Oxford University Press, New York.

Fenno, Richard. 1973. *Congressmen in Committees*. Little-Brown, Boston.

Fenno, Richard E. Jr. 1978. *Home Style: House Members in Their Districts*. Little-Brown, Boston.

Fenno, Richard, F. Jr. 1977. "U.S. House Members in Their Constituencies: An Exploration." *The American Political Science Review* 71(3):883–917.

Fenno, Richard F. Jr. 2007. *Congressional Travels: Places, Connections, and Authenticity*. Pearson Education, Inc., New York.

Finocchiaro, Charles J. and David W. Rohde. 2008. "War for the Floor: Partisan Theory and Agenda Control in the U.S. House of Representatives." *Legislative Studies Quarterly* 38(1):35–61.

Fisher, Samuel H. III and Rebekah Herrick. 2013. "Old versus New: The Comparative Efficiency of Mail and Internet Surveys of State Legislators." *State Politics and Policy Quarterly* 13(2):147–163.

Folwell, William Watts. 1969. *A History of Minnesota*. The Minnesota Historical Society.

Francia, Peter L., John C. Green, Paul S. Hernson, Lynda W. Powell and Clyde Wilcox. 2003. *The Financiers of Congressional Elections*. Columbia University Press, New York.

Frisch, Scott A. and Sean Q. Kelly. 2006. *Committee Assignment Politics in the U.S. House of Representatives*. University of Oklahoma Press, Norman, OK.

Gamble, Katrina L. 2007. "Black Political Representation: An Examination of Legislative Activity Within U.S. House Committees." *Legislative Studies Quarterly* 32(3):421–447.

Garand, James C. 2010. "Income Inequality, Party Polarization, and Roll-Call Voting in the U.S. Senate." *The Journal of Politics* 72(4):1109–1128.

Gartner, Scott Sigmund, Gary M. Segura and Bethany A. Barratt. 2004. "War Casualties, Policy Positions, and the Fate of Legislators." *Political Research Quarterly* 57(3):467–477.

Gilens, Martin. 2005. "Inequality and Democratic Responsiveness." *The Public Opinion Quarterly* 69(5):778–796.

Gilens, Martin. 2012. *Affluence and Influence: Economic Inequality and Political Power in America*. Princeton University Press, Princeton, NJ.

Gilens, Martin and Benjamin I. Page. 2014. "Testing Theories of American Politics: Elite, Interest Groups, and Average Citizens." *Perspectives on Politics* . Forthcoming.

Goldstein, Kenneth. 2002. "Getting in the Door: Sampling and Completing Elite Interviews." *PS: Political Science and Politics* 35(4):669–672.

Griffin, John D and Brian Newman. 2005. "Are Voters Better Represented?" *The Journal of Politics* 67(4):1206–1227.

Grossmann, Matt and Casey B. K. Dominguez. 2009. "Party Coalitions and Interest Group Networks." *American Politics Research* 37(5):767–800.

Groves, Robert M. 2006. "Nonresponse Rates and Nonresponse Bias in HousHouse Surveys." *Public Opinion Quarterly* 70(5):646–675.

Groves, Robert M., Floyd Jr. Fowler, Mich P. Couper, James M. Lepkowski, Eleanor Singer and Roger Tourangeau. 2009. *Survey Methodology*. 2nd ed. John Wiley and Sons, Inc., Hoboken, NJ.

Guinier, Lani. 1995. *The Tyranny of the Majority: Fundamental Fairness in Representative Democracy*. Free Press, New York.

Guttman, Louis. 1954. "Some Necessary Conditions for Common-Factor Analysis." *Psychometrika* 19(2).

Haines, Lynn. 1911. *The Minnesota Legislatue of 1911*. 919 New York Live Bldg., Minneapolis, MInn.: .

Hamm, Keith E., Ronald D. Hedlund and Stephanie Shirley Post. 2011. "Committee Specialization in U.S. State Legislatures during the 20th Century: Do Legislatures Tap the Talents of Their Members?" *State Politics and Policy Quarterly* 11(2):299–324.

Harden, Jeffrey J. and Thomas M. Carsey. 2012. "Balancing Constituency Representation and Party Responsiveness in the U.S. Senate: The Conditioning Effect of State ideological Heterogeneity." *Public Choice* 150(1):137–154.

Hartog, Chris Den and Nathan W. Monroe. 2011. *Agenda Setting in the U.S. Senate: Costly Consideration and Majority Party Advantage*. Cambridge University Press, Cambridge, MA.

Hawkesworth, Mary. 2003. "Congressional Enactments of Race-Gender: Toward a Theory of Raced-Gendered Institutions." *American Politial Science Review* 97(4):529–550.

Hayes, Thomas J. 2013. "Responsiveness in an Era of Inequality: The Case of the U.S. Senate." *Political Research Quarterly* 66(3):585–599.

Hedge, David, James Button and Mary Spear. 1996. "Accounting for the Quality of Black Legisalative Life: The View from the States." *American Journal of Political Science* 40(1):82–98.

Hofstadter, Richard. 1955. *The Age of Reform: From Bryan to F.D.R.* Knopf, Inc, New York.

Jacobs, Lawrence R. and Benjamin I. Page. 2005. "Who Influences U.S. Foreign Policy?" *American Political Science Review* 99(1):107–123.

Jenkins, Jeffery A. 1999. "Examining the Bonding Effect of Party: A Comparative Analysis of Roll-Call Voting in U.S. and Confederate House." *American Journal of Political Science* 43(4):1144–1165.

Jenkins, Shannon. 2008. "Party Influence on Roll Call Voting: A View from the U.S. States." *State Politics and Policy Quarterly* .

Kaiser, Henry F. 1960. "The Application of Electronic Computers to Factor Analysis." *Educational and Psychological Measurement* 20:141–151.

Kingdon, John W. 1977. "Models of Legislative Voting." *The Journal of Politics* 39(3):563–595.

Kirkland, Justin H. 2012. "Wallet-Based Redistricting: Evidence for the Concentration of Wealth in Majority Party Districts." *State Politics and Policy Quarterly* 13(1):49–69.

Kousser, Thad. 2005. *Term Limits and the Dismantling of State Legislative Professionalism*. Cambridge University Press, New York.

Kousser, Thad. 2006. "The Limited Impact of Term Limits: Contingent Effects on the CoComplexi and Breadth of Laws." *State Politics and Policy Quarterly* 6(4):410–429.

Kousser, Thad, Jeffrey B. Lewis and Seth E. Masket. 2007. "Ideological Adaptation? The Survivial Instinct of Threatened Legislators." *The Journal of Politics* 69(3):828–843.

Krehbiel, Keith. 1988. "Spatial Models of Legislative Choice." *Legislative Studies Quarterly* 13(3):259–319.

Krehbiel, Keith. 1991. *Information and Legislative Organization*. Michigan University Press.

Krehbiel, Keith. 1993. "Where's the Party." *British Journal of Political Science* 23(2):235–266.

Krehbiel, Keith. 2004. "Legislative Organization." *The Journal of Economic Perspectives* 18(1):113–128.

Kunkell, Joseph A. 1988. "Party Endorsements and Incumbency in Minnesota Legislative Nominations." *Legislative Studies Quarterly* 13(2):211–233.

Lance, Charles E., Marcus M. Butts and Lawrence C. Michels. 2006. "The Sources of Four Commonly ReReport Cutoff Criteria: What Did They Really Say." *Organizational Research Methods* 9(2):202–220.

Lodge, Milton and Ruth Hamill. 1986. "A Partisan Schema for Information Processing." *American Politial Science Review* 80(2):505–520.

Masket, Seth E. 2011. *No Middle Ground: How Informal Party Organization Control Nominations and Polarize Legislatures*. The University of Michigan Press, Ann Arbor.

Masket, Seth E. 2012. Is the Electoral Connection Necessary? Ideological Caucuses and Formal Legislative Parties in Minnesota. New Orleans: . Southern Political Science Association Conference.

Mayhew, David R. 1974. *Congress: The Electoral Connection*. Yale University, New Haven, CT.

Miller, Warren E. and Donald E. Stokes. 1963. "Constituency Influence in Congress." *American Politial Science Review* 57(1):45–56.

Moncrief, Gary F., Joel Thompson and Robert Schuhmann. 1991. "Gender, Race, and the State Legislature: A Research Note on the Double Disadvantage Hypothesis." *The Social Science Journal* 28(4):481–487.

Mondak, Jeffrey J. 2001. "Developing Valid Knowledge Scales." *American Journal of Political Science* 45(1):224–238.

Nokken, Timothy P. and Keith T. Poole. 2004. "Congressional Party Defection in American History." *Legislative Studies Quarterly* 29(4):545–568.

Phillips, Anne. 1995. *The Politics of Presence*. Oxford University Press, Oxford, UK.

Poole, Keith T. and Howard Rosenthal. 1997. *Congress: A Political-Economic History of Roll Call Voting*. Oxford University Press, New York.

Ranney, Austin. 1972. "Turnout and Representation in Presidential Primay Elections." *American Politial Science Review* 66(1):21.37.

Rhan, Wendy M. 1993. "The Role of Partisan Stereotypes in Information Processing about Political Candidates." *American Journal of Political Science* 37(2):472–496.

Richards, David. 2007. "Elite IntInterview: Approaches and Pitfalls." *Politics* 16(3):199–204.

Rigby, Elizabeth and Gerald C. Wright. 2013. "Political Parties and Representation of the Poor in the American States." *American Journal of Political Science* 57(3):552–566.

Romzek, Barbara S. and Jennifer Utter. 1997. "Congressional Legislative Staff: Political Professionals or Clerks?" *American Journal of Political Science* 41(4):1251–1279.

Rosenstone, Steven J. and John Mark Hansen. 2003. *Mobilization, Participation, and Democracy in America*. Longman, New York.

Saint-Germain, Michelle A. 1989. "Does Their Difference Make a Difference? The Impact of Women on Public Policy in the Arizona Legislature." *Social Science Quarterly* 70(4):956–968.

Schattschneider, E. E. 1960. *The Semisovereign People: A Realist's View of Democracy in America*. Holt, Rinehard, and Winston, Inc., New York.

Schlesinger, Joseph A. 1966. *Ambition and Politics: Political Career in the United States*. Chicago, Rand McNally.

Schuman, Howard. 2011. *Method and Meaning in Polls and Surveys*. Harvard University Press, Cambridge, MA.

Schuman, Howard and Stanley Presser. 1996. *Questions and Answers in Attitude Surveys: Experiment on Question Form, Wording, and Context*. Sage Publications Inc., Thousand Oaks, CA.

Shapiro, Robert Y. 2011. "Public Opinion and American Democracy." *Public Opinion Quarterly* 75(5):982–1017.

Shepsle, Kenneth A. and Barry R. Weingast. 1994. "Positive Theories of Congressional Institutions." *Legislative Studies Quarterly* 19(2):149–179.

Sinclair, Barbara. 1989. *Transformation of the U.S. Senate*. Johns Hopkins University Press, Baltimore.

Smeeding, Timothy M. 2005. "Public Policy, Economic Inequality, and Poverty: The United States in Comparative Perspective." *Social Science Quarterly* 86(1):955–983.

Snyder, James M. and Michael M. Ting. 2003. "Roll Calls, Party Labels, and Elections." *Political Analysis* 11(4):419–444.

Sorauf, Frank J. 1980. *Parties and Politics in America*. Little-Brown, Boston.

Squire, Peverill. 2007. "Measuring State Legislative Professionalism: The Squire Index Revisited." *State Politics and Policy Quarterly* 7(2):211–222.

Stimson, James A., Michael B. Mackuen and Robert S. Erikson. 1995. "Dynamic Representation." *The American Political Science Review* 89(3):543–565.

Swers, Michele L. 2005. "Connecting Descriptive and Substantive Representation: An Analyses of Sex Differences in Cosponsorship Activity." *Legislative Studies Quarterly* 30(3):407–433.

Tedin, Kent L. and Richard W. Murray. 1979. "Public Awareness of Congressional Representatives: Recall Versus Recognition." *American Politics Research* 7(4):509–517.

Tobin, Richard J. and Edward Keynes. 1975. "Institutional Differences in the Recruitment Process: A Four-State Study." *American Politial Science Review* 19(4):667–682.

Verba, Sidney, Kay Lehman Schlozman and Henry E. Brady. 1995. *Voice and Equality: Civic Voluntarism in American Politics*. Cambridge: Harvard University Press.

Volden, Craig and Alan E. Wiseman. 2014. *Legislative Effectiveness in the United States Congress*. Cambridge University Press.

Weingast, Barry R. 2010. "Agenda Control in Congress: Evidence from Cutpoint Estimate and Ideal Point Uncertainty." *Legislative Studies Quarterly* 35(2):157–185.

Welch, Susan and Eric H. Carlson. 1973. "The Impact of Party on Voting Behavior in a Nonpartisan Legislature." *American Politial Science Review* 67(3):854–867.

Williams, Melissa S. 1998. *Voice, Trust, and Memory: Marginalized Groups and the FFailing of Liberal Representation*. Princeton University Press, Princeton, NJ.

Wright, Gerald C. and Brian F. Schaffner. 2002. "The Influence of Party: Evidence from the State Legislatures." *The American Political Science Review* 96(2):367–379.

Wright, Gerald C., Robert S. Erikson and John P. McIver. 1987. "Public Opinion and Policy Liberalism in the American States." *American Journal of Political Science* 31(4):980–1001.